Croonian Lectures
ON
POINTS CONNECTED WITH DIABETES.

Delivered at the Royal College of Physicians,

BY F. W. PAVY, M.D., F.R.S.

LECTURE III.—PART IV.

IT is one of the properties of amyloid substance to possess a strong tendency to pass into sugar under the influence of contact with bodies of the nature of ferments. Various unnatural states, and the condition existing after death, lead to its passage in this direction; but that such is not its proper destination, certainly not to any material extent, is shown, I maintain, by the several considerations I have advanced. Why under natural circumstances it should be capable of resisting, as it is contained in the hepatic cells, the action of the ferments around, whilst under other circumstances it does not, is a problem which I cannot attempt to solve. It can only be said that such is observed to be the fact; and with regard to the well-known phenomenon of the coagulation of the blood, it happens that we are situated in a position of equal difficulty. If what is meant by the glycogenic function of the liver applies to that minute amount of sugar (I have always spoken of a minute amount of sugar existing in the blood) which is allowed to reach the circulation—that which, through its being minute, obviates the production of the diabetic state,—I readily concede that such a function exists. But such are not the terms under which the glycogenic doctrine has been advanced, and it is the passage of sugar from the liver as an incident belonging to the large operation of appropriation of this principle to force-production that I contend is incompatible with the evidence derivable from the facts before us. I do not simply say that the liver does not transmit sugar into the circulation for the purpose named, but that it exerts an active part in preventing it from so passing, and it is through this active part we escape being diabetic. In addition to other considerations, my argument is, that in proportion as sugar reaches the general circulation so it shows itself in the urine; and the fact that sugar does not appear in the urine in a healthy state, as it does in diabetes, is proof that the material involved in the question must be appropriated in some other way instead of being allowed to pass as sugar into the general circulation. If the material, in fact, with which we are concerned—and it includes the carbo-hydrate principles ingested and produced naturally—passed as sugar into the general circulation, the accumulation which occurs in diabetes could only arise from a subsequent faulty process of destruction. There is no alternative to fall back upon. But supposing it to be the natural condition that sugar reached the circulation for subsequent destruction in the system, it would be conveyed to the kidney as well as to the general capillaries, and in proportion to the amount furnished for destruction so would be the amount for elimination with the urine. The state in which this secretion is normally found shows that this hypothesis cannot hold good.

I consider that the great service which has been rendered by Bernard in relation to this matter is the discovery of amyloid substance. Without this discovery we could not have attained the position we now stand in. Science is, therefore, deeply indebted to him for the perseveringly and skilfully conducted researches which placed us in possession of knowledge the importance of which it is almost impossible to overrate. I protest, however, against the application of the term "glycogen" to this material, from the conviction that the view which led to its employment is founded upon error. Moreover, in its terminal character it stands at variance with the chemical nomenclature adopted for the bodies to which it is allied. I do not say that "amyloid substance" possesses any other claim than that of signifying what the body is, without involving any physiological error. I think it would be worth while for it to be renamed, and "zoamylin," which I remember seeing suggested by some one many years back, would be scientifically the most appropriate designation that could be employed. There is danger, however, in now adopting this name, that some confusion might be created, and it appears to me that it would be a fitting tribute to the memory of Bernard, as the discoverer of the substance, to call it after him, "Bernardin," which would fall in with the ordinary terminal construction adopted, and would be of itself at once suggestive of the body referred to. I throw this out for the consideration of chemists and others, and should the suggestion meet with favour, I would myself hereafter employ the term.

I now come to the question of why sugar should reach the circulation as it does in diabetes in opposition to what occurs under normal circumstances. Instead of the sugar absorbed from the alimentary canal being arrested by the liver, and the amyloid substance being restrained from passing to any material extent into sugar, the phenomena of diabetes show that in this disease the sugar of ingestion is allowed to reach the general circulation, and the amyloid substance to be converted into and escape as sugar. Whether the sugar from ingestion passes directly through the liver, or whether it is first transformed into amyloid substance, and this re-converted into sugar, I cannot say; but the sugar eliminated with the urine, standing in relation as it does to the sugar derivable from ingestion, renders it evident that either one or other must occur. Plainly represented, the problem to be solved may be thus expressed? Why is it that sugar passes into the general circulation in diabetes, instead of being prevented doing so to more than what may be spoken of as an insignificant extent in the healthy state? Let us see whether a satisfactory solution cannot be furnished.

Many years ago I noticed, after ligaturing the portal vein, and thus allowing only the blood of the hepatic artery to reach the liver, that the contents of the circulatory system became highly charged with sugar. I was struck with this phenomenon, seeing that the amount of blood passing through the liver was so much diminished, and commented upon it as furnishing a link of evidence opposed to the glycogenic theory. I did not find that the urine became saccharine, but this was not to be wondered at. The operation leads to such an accumulation of blood in the portal system, and therefore deviation from the general circulation, that the supply to the kidney may well be expected to be insufficient to permit the secretion of urine, certainly to any material extent, to occur. Bernard, however, has spoken of having observed the presence of sugar in the urine after ligature of the portal vein. So far his experience tallies with the effect I have described as produced upon the blood, but I imagine that his ligature must have been placed low enough for some of the vessels to have been left free; for he speaks of his animals as having recovered from the operation, whilst in my own experiments the state induced by the blockage of the circulation appeared to be incompatible with anything more than a few hours' existence.

Struck with this effect of allowing only the arterial supply to reach the liver, I afterwards tried to connect the portal with the right renal vein in such a manner that the circulation might be maintained with the portal stream diverted from the liver. Success, however, was rendered hopeless by the coagulation which occurred in the connecting tube.

Later on it occurred to me to ascertain what would be the result of injecting defibrinated arterial blood into one of the veins of the portal system. The idea was a fortunate one, for the issue of the experiment appears to me to supply the key to the elucidation of the cause of the passage of sugar from the liver into the circulation in diabetes.

My results were communicated to the Royal Society, and published in the "Proceedings" for June and November, 1875. They show that by introducing defibrinated arterial blood into the portal system strongly marked glycosuria is quickly induced. When I started upon the investigation, I was quite unprepared for the evidence that became revealed, and before committing myself to a conclusion I established by the negative effect observable under the employment of defibrinated venous blood that the glycosuria was due to the influence of the oxygenated blood, and not to any other part of the operation.

I may incidentally refer here to a piece of information I came across in performing these experiments, which may possibly prove of assistance to those who are engaged in investigations bearing upon the coagulation of the blood and the office of the spleen. My previous experience of the

impunity with which defibrinated blood may be injected into one of the general veins—the jugular, for instance,—did not lead me to expect that anything would occur to impede the accomplishment of the object I had in view. To my concern, however, I found that the introduction of the blood into the portal system was apt to be followed by a complete stoppage of the portal circulation, from the occurrence of coagulation in the trunk of the portal vein and its ramifications in the liver. This of course completely frustrated the experiment, and in seeking to extricate myself from the difficulty, I tried the effect of extirpating the spleen before the performance of injection. I was led to do this from noticing that it was in the trunk of the portal vein and in the vessels further on, and not at the immediate seat of injection, that the clotting of blood occurred. I found that the effect was to produce what I wanted. No coagulation now occurred. A further effect noticeable was that the blood throughout the system after death was restrained from undergoing coagulation in the ordinary manner. Besides the two fibrin-forming factors, fibrinogen and fibrinoplastin, it appears from recent research that the agency of a fibrin-producing ferment is wanted for inducing coagulation, and, if any view were expressed, the conjecture might be hazarded that it may be upon this latter that the extirpation of the spleen in some manner or other tells in determining the result I have alluded to.

Returning from this digression to the subject before us, I desire to lay stress upon the fact that the effect of arterial or oxygenated blood introduced into the portal system is to cause sugar to escape from the liver to a sufficient extent to induce strongly marked glycosuria. In half an hour, for instance, after the completion of the injection, I have noticed as much as fifteen grains of sugar to the fluid ounce in the urine—that is, a proportion of about 33 per 1000.

I regard the knowledge thus acquired as of cardinal importance in relation to diabetes. We see how, by a simple alteration in the character of the blood going to the liver, a altered action occurs in the organ which leads to the escape of sugar and the production of glycosuria. No new agent is called into play. The passage of blood through the vessels of the chylopoietic viscera in such a manner as to reach the portal vein in an imperfectly de-arterialised state will supply all that is required to account for the appearance of sugar that is noticed in diabetes. I shall show further on how the bloodvessels may be concerned in determining an imperfectly de-arterialised condition of the portal blood, and how the nervous system, by its influence upon the bloodvessels, may stand at the foundation of all. What I wish at present to draw attention to is simply the fact that oxygenated blood reaching the liver through the portal vein is perversive of the proper action of the organ, and instrumental in producing glycosuria.

Upon discovering that glycosuria was produced by the introduction of oxygenated blood into the portal system, it occurred to me that I might possibly be able to surcharge the blood with oxygen through the medium of the respiration, and obtain a similar result. I first tried the effect of causing an animal to breathe oxygen instead of air, and on two occasions, amongst several experiments upon the dog, succeeded in inducing a strongly-marked saccharine condition of the urine. In one of the instances the amount of sugar noticeable was 10·48 grains to the fluid ounce (about 23 per 1000), and in the other 5·71 (about 13 per 1000).

I take it that the reason the inhalation of oxygen did not in all my experiments lead to glycosuria is to be found in the uncertainty of getting the blood in reality surcharged with oxygen. Physiology teaches us that the respiratory movements are governed by the condition of the blood. There is a kind of self-regulating action in operation produced by the influence of the condition of the blood upon the respiratory nervous centre, the accumulation of carbonic acid increasing, and that of oxygen diminishing the stimulus through which the muscles of respiration are called into play. Hence under the respiration of pure oxygen there may be in reality no material alteration produced, the muscular movements adapting themselves to the increased efficiency of the oxygenating process. Indeed, I noticed in some of my experiments that a state of apnœa—I use this word in its strict sense as signifying cessation of respiratory movement—was temporarily induced; and at first I did not know what it meant, and thought that the animal's life was in jeopardy. In those instances where glycosuria was induced it was specially observed that the respiratory movements were carried on in a deep and excited manner.

In addition to the experiments upon the dog, I conducted a number upon frogs, placing the animals in a sealed receiver, and passing a stream of oxygen through it for a space of three or four hours. In some instances no effect upon the urine was perceptible, but in others a distinctly saccharine behaviour was noticed. The urine of the frog is readily obtained by means of properly applied pressure over the bladder; and, by using a small test tube, the amount procured from one animal was generally sufficient for testing.

Finding that the result in the experiments with the inhalation of oxygen was dependent upon the chance degree of activity with which the respiratory movements were carried on, I tried, later on, the effect of performing artificial respiration. An artificial respiration apparatus was employed which enabled me to inflate and exhaust the chest at any rate of frequency I desired. By its use I found that the blood could be readily surcharged with oxygen to a sufficient extent to induce a prolonged state of apnœa observable on discontinuing the performance of the process.

Now, by means of artificial respiration conducted in this way, and applied to the dog, I succeeded in producing strongly marked glycosuria. At first I employed oxygen, but afterwards found that atmospheric air equally answered the purpose. In my communication to the Royal Society to which I have already referred, I have stated that in one of the instances the analysis of the urine showed the presence of eleven grains of sugar to the fluid ounce, or about 24 parts per 1000.

I may mention that there is one observer, Tieffenbach, who has anticipated me by obtaining glycosuria by artificial respiration. In referring to the production of glycosuria in curarised rabbits subjected to artificial respiration he incidentally states that he once obtained the same result without the previous poisoning.

It is a point of interest that a gas—viz., carbonic oxide—which produces the same physical effect on the blood as oxygen, likewise occasions glycosuria. The bright scarlet colour belonging to arterial blood is also the colour produced by the influence of carbonic oxide; and it has been further shown by Dr. Gamgee that the spectral properties of the compound formed by the colouring matter with carbonic oxide are identical with those of oxidised blood. Carbonic oxide, however, stands in a different position from oxygen, as regards tenacity of union with the hæmoglobin, and whilst assuming that their mode of action may be the same in determining glycosuria, we can discern in this difference an explanation of the difference noticeable in the degree of facility with which the phenomenon is producible, for experiment shows that the inhalation of carbonic oxide affords one of the most speedy means of causing the urine to become strongly charged with sugar. I apprehend in the case of both gases that the glycosuria is due either to the gas itself or the compound formed with hæmoglobin exciting a transformation of the amyloid substance of the liver into sugar. Now it happens the combination between oxygen and hæmoglobin (oxy-hæmoglobin) is so feebly maintained that the gas is readily displaced from the corpuscle by the agency of carbonic acid. Hence the facility with which the oxygen is yielded up in the systemic capillary circulation, and the blood reduced from the oxidised to the deoxidised condition, in which state it is thereby allowed to reach the liver, and, as observation shows, does not act like oxidised blood in leading to the conversion of amyloid substance into sugar. With carbonic oxide, on the other hand, its difficulty of displacement from the corpuscle is known to be a marked feature belonging to it. As the result of its inhalation the blood becomes charged with it, and reddened as it is by oxygen; but, on account of the tenacity with which its combination with hæmoglobin is maintained, it is not similarly yielded up in the systemic capillaries. It is thence allowed to reach the liver, and act in the manner I have suggested in producing glycosuria. The effect of oxygenated blood on the liver shows that if oxygen were held by the corpuscle in the same way as carbonic oxide, it might be fairly assumed that glycosuria would be as readily produced by the one as by the other. It is owing to the facility, it may be considered, with which oxygen is removed from the blood during its passage through the systemic capillaries that we escape being glycosuric under the process of respiration carried on in an ordinary manner in the atmosphere; but should the oxygen introduced into the blood surpass, as it may be made to do by

BEST COPY AVAILABLE

the experimental methods I have referred to, the capacity of being abstracted to an extent to produce a natural venous condition of the fluid within the veins, then, as we have seen, glycosuria is induced.

THE RHEUMATIC ORIGIN OF CHOREA.

By OCTAVIUS STURGES, M.D.,
PHYSICIAN TO THE WESTMINSTER HOSPITAL, ASSISTANT-PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN.

DURING the past two years I have noted seventy-one cases of chorea with reference to its association with rheumatism. Of these, fifty-one were admitted to the convalescent branch of the Children's Hospital, and twenty were patients of mine at the Westminster Hospital or in private. The fifty-one cases have an exceptional value, as they came to me from other physicians in the ordinary course of hospital practice with their histories already recorded by the registrar of the hospital, Dr. Garlick. Any bias of my own, therefore, upon the point in question is here excluded. On the contrary, the twenty cases, as being mine, may be regarded with suspicion—the very just suspicion, that is, which must attach to anyone who has to start in such an inquiry burdened with a previous persuasion in regard to it.

Taking the first series of fifty-one cases—fourteen boys and thirty-seven girls,—acute rheumatism is in the history of one, a girl aged ten years and a half; rheumatism is in the history of six,—in two of these, however, it is marked as "doubtful," and in one as "very doubtful."

Taking the second series of twenty cases—seven boys and thirteen girls,—acute rheumatism is in the history of two; in three there were limb pains which from their described character were clearly not rheumatic; and in no instance did chronic or subacute rheumatism seem to have been present. For the reasons stated, however, I will not rely upon this second list.

Yet that fifty-one consecutive cases should furnish no more than six (probably no more than half six) instances of previous rheumatism does not go far to favour the belief that the rheumatic poison or diathesis (whatever these may be) in some way or other favours chorea. Nor is such a belief supported by the statistics of others. Trousseau, it is true, believed that the "*vice rheumatismal* was the most marked and unquestionable of predisposing causes," but he reached that conclusion "by reckoning as evidence of rheumatism any traces of by-past endocarditis, as well as the usual articular disorder." By the same sort of reckoning Dr. Peacock found articular *or cardiac affection* in as many as five out of fourteen choreas.[1] And, speaking generally, the statistics upon the subject are rendered valueless owing to the fact that cardiac murmur (which it is now admitted may belong to chorea as such) is taken for evidence of rheumatism.

Rheumatic fever, on the other hand, occupies a somewhat different position. Dr. Ogle found eight cases of rheumatic fever in eighty of chorea. Dr. Chambers found six in thirty-three. And in twenty-two consecutive cases recorded by myself when registrar at St. George's Hospital, there were no less than three in *immediate and observed* connexion with acute rheumatism. One was a boy of nine recovering from acute rheumatism with pericarditis; another was a girl of sixteen, who got acute rheumatism in the course of severe chorea; the third was a girl of ten, who had acute rheumatism and chorea concurrently. In the seventy-one cases of Dr. Dickinson's table of chorea (Med. Chir. Trans., vol. lix.) there are four which succeeded "definitely and immediately" upon *acute* rheumatism. In the twenty-two fatal cases collected by the same author rheumatism is put down as the "cause" of the attack in five. All but one of these had *acute* rheumatism, and this one, a girl of thirteen, had "rheumatism" three times in connexion with as many attacks of chorea.

There is similar testimony of a quite classical kind in Dr. Bright's well-known paper on "Spasmodic Diseases accompanying Affections of the Pericardium." We have here a youth of seventeen affected with violent convulsive spasm, which is likened to chorea, and associated with acute rheumatism and endocarditis. "The convulsions," says the author, "are more violent than is almost ever seen in chorea." It may be added that the subjects of this form of affection are mostly past childhood,[2] that violent convulsion is developed with great rapidity, and that death is not unfrequent. An instance very similar to Dr. Bright's, occurring in a girl of eighteen, was lately reported in abstract by Dr. C. E. Hoar, of Maidstone, who had the great kindness to show me his full notes. The choreic movement here occurred in the course of acute rheumatism with mitral murmur. It soon became extremely violent, and terminated in death in four days.

This association is too frequent and precise to be accidental. In each instance it is beyond question that the symptoms are those of acute rheumatism; in each the convulsive affection arises in immediate connexion with that disease; and in all there is a strong presumption in favour of fibrinous deposit about the cardiac valves. Nevertheless, although a wide search or exceptional opportunity may yield many cases of the kind, so far is it from representing any rule of chorea that we have fifty-one consecutive examples with but a single instance of it.

But while acute rheumatism is thus found associated, rarely yet unmistakably, with choreic convulsion, the case is quite different in regard to "rheumatism." It is true that in almost all statistics, and especially in these fifty-one cases, it is this latter which has the chief mention, yet the actual circumstances fail to establish any real relationship of the kind alleged. "Rheumatism" is an extremely vague expression, and particularly so in children. Joint-pain in girls is most often non-rheumatic. We see for ourselves chorea developing out of pain as pain. The rheumatism which is spoken of is not in immediate connexion with the chorea. It is alleged to have occurred at some time or other, and this, in most cases, by ignorant women, who answer as they are expected to answer. So grave and mysterious a doctrine as that the rheumatic diathesis tends to produce chorea can never be made to rest upon so weak a foundation. In the cases under review the evidence amounts to this: That in fifty-one instances there are as many as six which are said to have suffered from symptoms which might have been rheumatic, but in half of these six the facts are admitted to be doubtful.

And while there is reason for doubting the reality of this connexion, the origin of the belief is easily traced. The relationship between acute rheumatism and chorea, once established, would be readily extended to all rheumatism whatever. To such extension many circumstances would contribute: the assumed affinity between rheumatic fever and every form of rheumatism; the occurrence in chorea of mitral murmur; the likeness between hysteric joint pain and pain from muscular fatigue or rheumatic pain. The prevalence of the doctrine would thus be easily accounted for without any necessity of assuming its truth, upon grounds, that is to say, which with our present knowledge are seen to have no relevancy in establishing it.

That chorea should attach itself to the rheumatic diathesis—an affection of childhood to a "habit" which belongs to advancing years—seems quite inexplicable, but that acute rheumatism should directly produce choreic convulsion is not altogether without parallel or possible explanation. Among the rare incidents of acute rheumatism, none are more remarkable than those produced by embolic plugging of the cerebral vessels. That such an event should by a slight modification produce, not paralysis but convulsion, described as choreic, yet, as Dr. Bright remarks, "more violent than is almost ever seen in chorea," may very easily be conceded to the advocates of the "embolic theory of chorea." But the occurrence of embolism, though an undoubted, is a very rare and unusual event of acute rheumatism; much more, then, must this particular consequence of it be rare and unusual.

I am not supposing that this is the nature of the connexion in all cases, even where the chorea follows acute rheumatism immediately. I should rather believe that such an explanation applied only to extreme examples of the kind, most of which are fatal; in other words, that embolism happens precisely in those cases where death enables the pathologist to find it. However that may be,

[1] These and the following numbers are quoted from Dr. Handfield Jones's Functional Nervous Disorders, art. Chorea.

[2] Of sixteen fatal cases at St. George's Hospital, one was a woman of fifty-four. Excluding her, the average age of the fifteen is nearly fifteen.

the connexion between acute rheumatism and chorea must, I think, be admitted. So rare is the combination, however, in non-fatal chorea that in my first series it contributes but one in fifty-one, in the first and second together but three in seventy-three, and in all three (including in the third series the exceptionally large proportion of three in twenty-two) but six in ninety-three.

These facts would seem to justify the following conclusions:—

1. Acute rheumatism, although found but rarely in the history of chorea, nevertheless occurs in such manner of connexion with it as to justify the assumption of some direct relationship. The association, however, is so exceptional that it hardly sensibly affects the question of the origin of ordinary childish chorea.

2. Chronic or subacute rheumatism, on the other hand, although appearing in such histories more often than the other, is so difficult of identification, so often disconnected in time, so seldom seen by competent observers in actual company with chorea, and so easily imputed without just cause, that the asserted influence of the "rheumatic diathesis," improbable in itself, is not borne out by the facts.

Wimpole-street, W.

NOTES ON GASTROTOMY IN STRICTURE OF THE ŒSOPHAGUS.

[WITH REPORT OF A SUCCESSFUL CASE BY PROFESSOR F. TRENDELENBURG, OF ROSTOCK.

BY W. THOMSON, M.D.,

CONSULTING SURGEON TO THE PETERBOROUGH INFIRMARY, SURGEON TO THE GREAT NORTHERN AND GREAT EASTERN RAILWAYS, ETC.

OUR object in publishing cases should be to demonstrate something tending to the good of the human family; and although we may traverse the same ground which others have traversed, there is work still left, and our labours with this object in view will never be unrewarded.

With the exception of Mr. Sidney Jones's case, which survived the operation forty-one days, M. Verneuil, of Paris, has been the only surgeon fortunate enough to have permanent benefit follow the operation of gastrotomy. It therefore affords me much pleasure to be able to give particulars of another case not before published in this country.

Gastrotomy performed for the purpose of constructing a fistula in the stomach in cases of œsophagus-stenosis has, it is well known, been hitherto followed by such strikingly unfavourable results because the operation has always been carried out as the final attempt with carcinomatous patients, whose eventual death was inevitable. Since the introduction of the antiseptic method the danger of intervening peritonitis has been shown to be comparatively small. In fifteen cases instanced by Jacobi,[1] two died from ulcerated peritoneum, and in the case of two others it remained doubtful whether death was the result of exhaustion or of incipient peritonitis. These data furnish, it is true, only an approximate measure of proportion, inasmuch as some of those operated upon died too soon after the operation to admit of their having been attacked by peritonitis, and it is also questionable whether there were not other cases which terminated unfavourably, and which have remained unpublished. If, however, the percentage of fatal cases from peritonitis ought to have been placed by Jacobi very much higher, it would have little bearing upon present opinion of the value of the operation; for since it has become known how important a part is played by septic processes in connexion with the setting in of traumatic peritonitis, the prognosis of all operations on the abdominal cavity has become much better, and promises continually to improve.

The danger of such septic processes in gastrotomy is not, however, very great; and the operation in this particular stands about on a level with the construction of an artificial rectum and the sewing on of an ovarial or echino-coccuscystis to the wall of the stomach. It is not difficult to perform this operation without causing blood to flow into the abdomen, and, if no corrosive fluid be present, it will not easily lead to septic action even without the use of antiseptic precautions.

In one particular the circumstances attending gastrotomy are less favourable than those consequent on enterotomy—that is, in so far that in gastrotomy the stomach tries to draw itself away from the stomach wall, whereas in enterotomy the stretched and elastic intestine sets itself at the bend against the wall of the abdomen, so that the reclosing of the abdominal cavity takes place automatically through the adhesion of the intestine and the abdominal wall.

If vomiting occur after gastrotomy has been performed, the tension of the stomach may be so great that, if insufficiently nourished, it may tear itself away from the abdominal wall, as Sédillot and Cooper Forster experienced. In gastrotomy more depends, therefore, upon certainty of nourishment than in enterotomy.

Verneuil, in his case (the first which was attended with lasting results) applied a wreath of fourteen sutures of silver wire, and thinks there is a special advantage in the use of silver wire. To this, however, no great importance need be attached, for silk will do just as well. It cannot be supposed that the action of the stomach in vomiting would loosen the well-tied knot of a silk suture, or break the thread itself, unless the latter were very thin. If the stomach were to tear itself away from the stomach-wall the action would more probably be that the wall of the stomach were cut through at the point where the stitches were made—that, in fact, the stomach-wall tore away from the stomach. This could not be prevented by the choice of this or that material, but only by the right method of sewing. Many stitches must be made close together, and each of them must contain a sufficiently wide and thick piece of the stomach-wall. Fortunately, the wall of the stomach is so thick that these conditions can be easily fulfilled. It is also advisable immediately after sewing up to open the stomach, and put in a drain-pipe, and to leave the stomach empty so long as there is any inclination to vomit, the pull upon the stomach being always less severe when empty than when it is filled. Lastly, the stomach-wall must be sewn up at a point which admits of it being drawn to the opening without the use of force. If these conditions are fulfilled, it matters little whether the fistula be placed at the cardiac or pyloric side of the stomach.

These questions of operative *technique* are partly answered *à priori*, and the experience of previous operations has in part decided them. If we desire, however, to form an opinion of the practical value of the operation, we must first of all consider the question, What is the degree of infirmity which remains as the result of the operation? With regard to this experience, only in cases of patients who have become really so far convalescent that, apart from their stomach fistula, they may be considered to be restored to health, can decide.

The only case up to the present time in which such a result has been attained is that published by Verneuil.[2] Verneuil operated on a young man of seventeen years of age, who was nearly dying of hunger on account of a cicatrised stricture of the œsophagus, and he was enabled by nourishment, introduced through a fistula, to bring him back to his normal weight and condition of strength. In two months the weight of the body increased from 34 kilogrammes (68 lb.) to 42 kilogrammes (84 lb.)—that is to say, about one-fourth.

Now I can place by the side of those of Verneuil some results obtained by my fellow-student, now Professor Trendelenburg, of Rostock, which confirm and amplify Verneuil's experiences; and this is especially the case with regard to the question of lasting infirmity, in reference to which this case (which I will at once briefly report) is of much interest. The patient, a boy eight years of age, is, in my opinion, through the method by which he feeds himself without a stomach-syringe, placed in a much better position than the patient operated upon by Verneuil. The following report is translated from the German:—

"Henry K——, of Goldewin, near Güstrow, born on the 14th of August, 1869, drank, in July last year, by accident, a draught of sulphuric acid. About a month afterwards difficulties in swallowing began to take place, on account of which the boy was placed under the treatment of Dr. Krull, of Güstrow. Every week several probings of the œsophagus were made, which were attended by good results; neverthe-

[1] A. Jacobi: Gastrotomy in Stricture of the Œsophagus. New York, 1874.

[2] Verneuil Observation de Gastrotomie Partiquée avec succes pour un Rétrécissement cicatriciel infranchissable de l'Œsophage (Bulletins de l'Académie de Médecine, No. 44, 1876).

less the parents soon neglected to bring the boy regularly to be operated upon by the catheter, and a rapid contraction of the stricture took place. On December 18th the use of the catheter failed, and Dr. Krull sent the boy to the hospital. Here also it was found impossible to pass the stricture, which was situated in the lowest division of the œsophagus. Flexible bougies bent regularly round before the stricture, and when attempts were made with pointed instruments made of metal or fish-bone blood made its appearance, and during the next day or two pains between the shoulder-blades with feverishness occurred, which made it appear probable that the probe had taken a wrong direction. The difficulties in swallowing were very variable. Sometimes the boy could swallow thick fluids, such as soft-boiled eggs, &c.; but generally only milk would pass, and sometimes broth and very thin soup; but not unfrequently, after attempts with the catheter had been made, everything returned. The boy was then nourished by means of Leube's clysmata.

"While, during the month of March, the condition of the boy remained so miserable, his strength fell off rapidly. The temporary complete stoppage of the stricture took place more and more frequently. After the injection of the pancreas-meat substance the sphincter ani refused to act, and the boy lay shivering and hungry in bed or sat sorrowfully huddled up by the fire. It was only with great difficulty that he was able to crawl about, supporting himself with his hands by the furniture &c. at every step. His weight fell to thirty-three pounds, and it was evident that the wasting away had attained its maximum. Under these circumstances, the consent of the father was obtained to the operation of gastrotomy, which was carried out on the 28th of March.

"The skin was cut through for a length of four to five centimetres (about two inches) in a diagonal direction, running from right to left, parallel with the underside of the cartilaginous portion of the eighth left rib, and at a distance of a finger's breadth from it. The wall of the abdomen was divided in the same direction as far as the peritoneum, and the left rectus at the same time cut partly through. All the vessels were then carefully bound up, and after the bleeding had entirely stopped, the peritoneum was divided in the same direction. The edge of the left lobe of the liver was then exposed to view, rising and falling with the respiration, and also a piece of intestine, which might have belonged either to the colon or to the stomach. As it could not be decided by feeling about with the introduced finger to which of these it was attached, I next pulled the diaphragm to the front, and could then easily find the junction of the same at the colon and at the stomach. The peculiar construction of the arteria and vena gastro-epiploica made the junction of the diaphragm at the stomach so characteristic that all doubt disappeared as soon as these vessels were exposed to view. The stomach had shrunk together and attached itself to the vertebral column. Its front side was now grasped at a point corresponding the best with the incision, drawn somewhat forward out of the opening, and fixed temporarily in the opening by two acupuncture needles stuck through it transversely. The two needles rested crosswise on the outer surface of the abdomen. In order that the peritoneum should with certainty be included in the sewing up, the edge of it, where cut, was grasped with pincettes and was drawn forward and secured by laying the pincettes over on one side. For the stitching moderately strong silk was used, and the stitches were so arranged that the outer skin, the wall of the abdomen, and the peritoneum were pierced, and the wall of the stomach taken up as much as possible in its entire thickness. Altogether fourteen stitches were made. After the sewing, which surrounded a piece of the stomach wall in the form of a circle about 1½ centimetre (⅔ inch) in diameter, was completed, the stomach wall was cut through within this circle crosswise, and a drain-pipe inserted in the stomach. The stomach was found to be perfectly empty. The whole operation was conducted under antiseptic precautions. The narcosis was extremely successful. No vomiting took place, and when the boy awoke he still remained free from any inclination to vomit, but as he then complained of severe pain morphia was given to him. During the next few days hardly any reaction in consequence of the operation was observable. The body remained just as scaphoid-shaped and drawn-in as before. The temperature rose only once to 101·7° Fahr. (38·6° Celsius), but nausea and vomiting did not occur. After the second day, besides the nourishing clisters, small quantities of parings of meat and egg were passed, with care, direct into the stomach; and on the third and fourth days the stitches were removed. As a remarkable fact, after the operation the swallowing became somewhat easier. The boy was able again to drink milk pretty comfortably; perhaps, through the tension exerted upon the stomach, some obstructive twist in the stricture may have become straightened. Very soon, however, this improvement disappeared, and since May 12th the œsophagus has remained absolutely impenetrable.

"The boy recovered but slowly from his condition of weakness. On the sixth day after the operation a feverish catarrh of the stomach and intestine appeared, attended with diarrhœa, which continued in various degrees of intensity until the middle of June. The food, consisting of meat-parings, soft-boiled egg, milk, Nestler's children's food, &c., was introduced by means of a syringe into the stomach at intervals of three hours; the meat, generally, after the boy had first masticated and salivated it, and spat it out again. When, however, this method of introducing the food was replaced by a cleaner and more natural one, the stomach catarrh disappeared. A longer tube was attached to the drain-pipe, and through this the boy now lets the masticated food slide down direct into the stomach, which he assists by blowing slightly with the mouth. The boy soon learnt to be quite at ease with his artificial œsophagus. By the middle of June he left his bed, and from this time forward his strength increased rapidly, so that by the middle of July the boy might be considered cured. Now he plays about the greater part of the day with the companions of his age in the open air, without experiencing any discomfort from his stomach fistula. The drain-pipe is stopped with a cork, which prevents any of the juices of the stomach from escaping. A dry eczema, which at first formed round the fistula, is now healed, and the boy lives on the usual diet. His weight is at present 21 kilogrammes (42 lb.); before the operation it was 32 lb.; on April 26th it was 34½ lb.; and it went on gradually increasing until July 28th, when it was 40 lb. In the space of four months the boy had therefore increased in weight about one-fourth.

"It remains to be mentioned that an attempt to enlarge the stricture from the stomach end did not succeed. The probe easily found the entrance into the œsophagus, but could not be passed through the stricture. Possibly the œsophagus had grown together entirely at the place of the stricture.

"From the history of the patient it will be apparent that in general the directions of Verneuil have been followed. The temporary securing of the front part of the stomach-wall in the incision by means of acupuncture needles stuck through crosswise, and resting flat on the outside of the abdomen, is to be recommended, also the bringing forward the cut edge of the peritoneum by means of pincettes. Verneuil says nothing about the difficulty of finding the stomach with so small an opening in the abdomen. This point, however, which is so particularly noticed by Schönborn, deserves some consideration. Lately it has again been met with by one of our own surgeons, who remained in uncertainty as to whether he was manipulating upon the colon or the stomach, and finally sewed up the colon. The diaphragm and the vena gastro-epiploica, which is seen more distinctly than the artery, will always be the safest guides to work by. I do not consider it desirable to make the fistula bigger than is absolutely necessary for the purpose of fixing a drain-pipe of about $\frac{4}{15}$th of an inch. In my opinion there is not much gained for the nourishment by so large an opening as Schönborn constructed, for in the normal method of feeding through the œsophagus the food does not reach the stomach in unbroken bites, but in a state of coarse pulp, and the attempt to surpass nature in this respect cannot be conducive of very beneficial resnlts. Apart from this a large opening has great disadvantages. It necessitates having a special apparatus for closing the entrance, where, as with a small fistula, it is only necessary to put in a suitable drain-pipe and cork it up from the outside, to close the stomach entirely. Verneuil found from experience that this kind of stopping was perfectly water-tight, because the somewhat swollen mucous membrane of the stomach sets itself close against the drain-pipe. This patient runs and jumps almost the whole day with the drain-pipe in the fistula without a trace of the contents of the stomach flowing out. The neighbourhood of the fistula remains dry; the eczema which at first took place is healed, and the gastric juice does not make itself perceptible even to the smell. The fistula has

certainly a tendency to become gradually larger, and so to make the stopping untight, but this enlargement is purely mechanical, and can be easily corrected. It is only necessary, as soon as any slackness is observable, about every fourth or sixth day to take out the drain-pipe at night, when the patient lies on his back for a few hours; the fistula then contracts almost as quickly as a tracheal fistula when the cannula is withdrawn."

In the adjoining woodcut, taken from a sketch, the boy is represented at his meals. How he feeds scarcely requires explanation. In feeding, the œsophagus is removed to the outside, otherwise the process is as much as possible like the natural one. The boy tastes his food as before. The masticated and salivated matter remains partly in his mouth and is partly swallowed down into the œsophagus, after which he places the tube in his mouth, and sends the food, by a slight choking and spitting motion, into the tube, and lets it glide down into the stomach, assisting it by blowing slightly with the mouth. Then he shuts the pinch-cock, which he had previously opened, and recommences the process afresh. In this manner the boy is made independent of the highly unappetising and comfortless procedure of the stomach syringe, and his feeding loses the disagreeable aspect of a physiological experiment. The gain to the boy cannot be over-estimated. He who cannot take part in the friendly meal is half shut out from the society of man.

Peterborough.

A SHORT ANALYSIS OF

SIXTY-TWO CHARTS OF TYPHOID FEVER.

WITH COMMENTS.

BY H. M. TUCKWELL, M.D., F.R.C.P.,
PHYSICIAN TO THE RADCLIFFE INFIRMARY, OXFORD.

THESE observations extend over a period of nine years, from Sept. 1869 to the present time, and have all been carried out in the quiet atmosphere of a hospital.

Of the sixty-two cases ten died—a fair average as compared with the estimate of Dr. Murchison, who finds the rate of death in 2505 cases at the London Fever Hospital as 1 in 5·38. But whereas of my first thirty cases eight died, of my last thirty-two only two have been fatal. How far this great difference may be attributed to certain slight changes in the treatment—to which allusion will be presently made—is a matter of doubt.

Of the ten fatal cases seven were examined. Of these, two died of perforation; three of pleuro-pneumonia; one of deep and extensive ulceration, without perforation; one, after weeks of uncontrollable vomiting, with a dilated stomach, and no other lesion. Of the three not examined, there was physical evidence of pneumonia in two, and in the third, a drinker, probably deep ulceration. Hence, speaking generally, five may be said to have died by the lungs, four by the bowels, and one from nervous exhaustion by vomiting.

Temperature.—Typhoid fever is, as a rule, not admitted into a hospital for the first two or three days of the illness, so that these observations are more complete in the later than in the earlier stages; but, as far as they go, it was found that from the fifth to the eighth day of the fever it was very uncommon to get an evening temperature of less than 103°. Where, in a very few instances, there was an evening temperature of less than 101°, the case was invariably mild and of short duration. In one boy the temperature on the evening of the fourth day was 101·2°, and on the fifth and sixth evening was normal; yet on the eleventh evening it rose to 104°, and he ran through a mild attack of three weeks. The case shows how, in medicine, each one of us must be prepared each day of his life to make mistakes. I suppose that anyone finding a sudden fall to normal temperature on the fifth and sixth day, with a quiet pulse, and no other symptom, would assure the friends of the patient or the students of his class, if he were so fortunate as to have one, that the case was one of febricula, and that the fever was at an end. Yet he would have, as I had, to eat his words on the seventh day and daily onwards for three weeks. A sudden unnaturl rise in the second or third week generally marked the onset of pneumonia. A sudden unnatural fall, in the same period, was usually an indication that hæmorrhage from an ulcer had occurred. Twice this fall, coupled with pallor of the face, made me suspect hæmorrhage, and bid the nurse be on the watch before the blood began to pass away by stool. As a rule, it was found that when there was a regular morning fall of two or three degrees, and a corresponding evening rise, the course of the disease was favourable; but that when the disease was formidable, and marked by complications, the curve was irregular, the morning temperature keeping high, or even exceeding the evening. This morning fall and evening rise are more marked in children than adults, so as to give, in the former, a peculiar zigzag to the temperature line on the chart. In the two instances where perforation was verified by post-mortem examination, at the very moment when, from the onset of vomiting and collapse, the gut seemed first to have given way, a sudden fall in the temperature occurred, in the one case from 103° to 98°; in the other from 102° to 97°, and thirty-six hours before death to 94°. On the other hand, in the deaths which were shown to have been caused by pneumonia, the rise in the temperature was as pronounced as was the fall in perforation. The highest temperature recorded was 106·8°, in a girl who died on the twelfth day of a virulent form of the fever.

Pulse.—It may be said that of all the symptoms of typhoid, regarded each for and by itself, the pulse is, on the whole, that which affords the most valuable criterion of the severity of the disease. In three of the sixty-two cases the pulse was never higher than 100, and all made easy recoveries. In thirteen of the sixty-two it was never higher than 110, and twelve of these made easy recoveries. On the other hand, there is no parallel whatever between the pulse-frequency and the range of temperature. In one case, a temperature of 103° to 105° accompanied a pulse-frequency of 80 to 100. In another, a pulse of 70, on the seventh evening of the fever, was present with a temperature of 104°.

Vomiting.—Speaking generally, it may be said that when vomiting occurs in typhoid it comes on either at the beginning of the illness, when it has no serious meaning, or towards the end of the illness, when it means a great deal—viz., perforation. Thus, it was present in both the cases of perforation, and, in both, was the only symptom which preceded the collapse; abdominal pain being altogether absent. Hence, late vomiting in typhoid may be called the essential symptom of perforation. But I wish to call attention to two other forms of vomiting which I have met with. The first is a troublesome sickness which I have twice seen appear together with pleuro-pneumonia. In both these cases the intestinal symptoms were very slight, the pulmonary very severe. One of them died, and there was found acute inflammation of the diaphragmatic pleura as well as of that covering the lower lobe of each solid lung. The other recovered; but here, too, the stress of the fever seemed to fall on the lower lobes of the lungs. It is a question whether

late vomiting in typhoid may not sometimes, where other signs are not grave enough to point to perforation, indicate pleuro-pneumonia of the base and diaphragmatic pleurisy. The second rare form of vomiting to which allusion may be made is one which I have only once met with, in the case of a young woman, who was going on well till the end of the fourth week, when, without any assignable cause, she began to vomit, and continued to throw up everything that she took, till the end of the seventh week, when she sank exhausted. On post-mortem examination, a few healed ulcers were found in the ileum, but no other lesion of any kind. The stomach itself was somewhat dilated, but the mucous membrane was healthy. I had been puzzled to account for this uncontrollable vomiting; and, on referring to books, I found, as I always find when I want information on any rare or peculiar symptom, that Trousseau had watched similar cases, and had treated them successfully with solid food and good old wine. I accordingly gave solid food and the best wine that the infirmary supplies, but without the same good result. It seems probable that this rare form of sickness must be called neurotic, and supposed, as Trousseau believes, to depend on nervous exhaustion.

Diarrhœa and intestinal hæmorrhage.—In eleven of the sixty-two there was an entire absence of diarrhœa, in some amounting to obstinate constipation, so that it was necessary to give injections. Of these eleven, one was fatal. Hence it is possible to have fatal typhoid fever with constipated bowels. Eight of the sixty-two passed blood by stool in greater or less quantity. Of these, six recovered, two died. It is a question among writers how far this symptom is to be regarded as dangerous. Trousseau goes so far as to say that he regards it as a favourable omen. I should rather agree with Murchison, that it is a symptom to fear at all times, rather than to welcome, though by no means necessarily fatal. In one of my cases the symptoms assumed the rare but terrible form of what Oppolzer used to call "scurvy-like cases" (scorbut-ähnliche Fälle). A young man, in the third week of the fever, had oozing from the gums, troublesome epistaxis requiring plugging, bloody urine, and severe hæmorrhage from the bowels. After falling to the brink of the grave, he eventually recovered with good nursing and frequent doses of turpentine.

Eruption.—In fifteen of the sixty-two there was no eruption. In two there was eruption in a relapse, but none in the first attack.

Albuminuria. — Albumen was present in the urine in twenty-eight of the sixty-two; in twenty followed by recovery, in eight by death. In many of the recoveries it was present in considerable quantity. In four of the eight deaths there was only a trace present. It would seem, therefore, that albuminuria is of itself no necessary criterion of the gravity of the case. It may be entirely absent in fatal typhoid, as one of the cases shows. But, if other symptoms are severe, much and persistent albuminuria is a grave symptom.

Relapses.—I have, with unusual interest, watched this peculiar phase of typhoid, for the reason that I was taught, twenty years ago, to regard it as the result of a too early administration of solid food, and to suppose, therefore, that if a case of typhoid were managed properly it ought never to relapse. But one peculiarity, noticed even then, in the relapse made me accept but hesitatingly this view—the frequent occurrence, namely, of a fresh eruption, an entirely new outbreak of the characteristic rose-spots; nay, the fact that, as some of my cases show, the eruption may be more abundant in the relapse than in the first period of the fever, or may even be altogether absent in the first period and yet present in the relapse. It seemed to me that a recurrence of diarrhœa and feverishness might be explained on the supposition that meat had been given too soon, but this would not account for the eruption.

Of the sixty-two, six relapsed, all of whom recovered. The relapse began in one case as early as the twenty-first day, in another as late as the sixtieth (as late as any which I can find recorded). But in the other four it showed itself by a sudden rise in the temperature from the twenty-fifth to the thirtieth day—that is, about the end of the fourth week, convalescence having begun about the end of the third. This suddenness or abruptness of the rise of temperature in the relapse was a marked feature in all the six cases, and bears out the remarks of Da Costa[1] on this particular point in typhoid. Now, in only one of the six cases could it be said that taking solid food too soon caused the relapse, and that was the case of a girl who had gone to the Headington Convalescent Home, and in whom a relapse occurred on the sixtieth day. All the rest were still on fluid diet, and under observation in our fever wards, when the relapse came on and ran its regular course.

My own observation of relapses in typhoid does not confirm the belief of some, that a relapse only occurs when there has been constipation during convalescence, and but slight diarrhœa during the first stage of the fever. In four of my six cases there was well-marked diarrhœa in the first period; in two only was there constipation. Nor does there seem to be any rule as to the state of the bowels in the relapse itself. Thus, in the four cases where there had been diarrhœa in the first period, there was a recurrence of the same in the relapse. In the other two, constipation reappeared in the relapse as it had been present in the first period.

It has lately occurred to me to see with Mr. Baker, of Abingdon, who kindly allows me to make this reference, a genuine instance of the very rare double relapsing typhoid. A young man ran through an ordinary typhoid for twenty-six days, when the temperature and pulse fell to normal, and he entered on convalescence. Suddenly, and without any assignable cause, on the thirty-first day, the temperature jumped from normal to 104°, and he ran through a distinct relapse of ten days, with fresh splenic enlargement, diarrhœa, and slight delirium. On the forty-second day the temperature and pulse fell again to normal, and he entered on a second convalescence, which continued, steadily progressing, for ten days, when again, with the same abruptness as on the previous occasion, the temperature bounded, on the fifty-third day, from normal to 103°, and then to 105°, a somewhat higher point than it had reached in either of the previous stages; he had fresh delirium, diarrhœa, pulmonary congestion, and albuminuria, and, interesting to relate, a fresh eruption of rose-spots. After thus nearly wearing out the patience of doctors and nurses, his temperature fell a third time to normal on the sixty-third day, and he made an excellent recovery, thus still further confirming my experience of a favourable end in relapsing typhoid.

Hence it may be said relapsing typhoid is a distinct form of the fever, not to be prevented by any precautions. It is not improbable that, as Da Costa supposes, a part of the poison remains latent, just as so often happens in malarial fever, and then reappears. From this point of view a comparison might similarly be made with syphilis. The relapse may occur any time between the twenty-first and sixtieth day of the fever, but is generally seen about the end of the fourth week. It is usually attended with a fresh eruption. It, as a rule, terminates favourably.

Treatment.—The following are the changes in treatment which have been carried out in the last half of my cases; and, although it so happens that a remarkable improvement in the results obtained has attended these changes, yet, until a much larger number of cases have been observed, it is unsafe to try to draw any inferences, but it is better simply to state the facts. First, the hydrochloric-acid mixture has been given up, and a little caraway water is now ordered in its place. Secondly, much less opium is given now than formerly. Whereas it was my custom in former years to try, under all circumstances, to check the diarrhœa, as something detrimental to the patient, either by Dover's powder or some other preparation of opium, I now, provided that the diarrhœa be not excessive (say, not more than six to eight stools in the twenty-four hours) leave it quite alone. Thirdly, more milk and less beef-tea is now given than formerly. If I can get a patient to take milk only, I am quite satisfied, and do not care to press beef-tea. As regards stimulants, I have not changed my belief of twelve years ago, when I first had beds of my own, that many cases of typhoid do perfectly well, from first to last, without any stimulant; but that where the so-called typhoid state is threatening, if the tongue is dry and brown with much sordes, if the pulse is frequent, feeble, and dicrotous, and, above all, if there is tremor in the lips or hands, good brandy, or good old wine if it can be obtained, given in small doses, at regular intervals, is a most valuable medicine. For hæmorrhage, a turpentine mixture has answered best in my hands, and the tendency to sickness which it is apt to cause is best prevented by a good flavouring of peppermint. I have no experience of the cold bath to offer.

Complications.—As complications of interest, allusion may

[1] Transact. Coll. Phys., Philadelphia, June, 1877.

be made to—1st: A case of cancrum oris of the right cheek, where a large slough separated from within, fortunately without perforating the cheek, and a piece of the alveolar process necrosed and exfoliated, the child eventually recovering with very slight deformity. 2nd: Acute mania, coming on at the end of the fourth week, becoming chronic, and still persisting when the girl (aged nine) was removed by her friends. 3rd and 4th: Diffuse carbuncular inflammation, in the one case of the buttocks, in the other of the abdomen, both of which recovered. 5th: Parotid bubo, developed in the third week of the fever, reaching a considerable size, and then subsiding without suppurating. Murchison has only once seen this in typhoid, though it is not uncommon in typhus. Authors differ as to its gravity, Trousseau regarding it as "un accident très grave."

Oxford.

PARAFFIN SPLINTS.

BY WILLIAM MACEWEN, M.D.,
SURGEON, ROYAL INFIRMARY, GLASGOW.

HAVING for some years past used paraffin for the formation of splints, and having found it possessing considerable advantages, I desire to bring its properties under the notice of surgeons.

At the outset I found that the results obtained by the use of paraffin were variable, uncertain, and untrustworthy. At times a splint might be obtained which was all that could be desired; at others the splint was soft and totally unsuitable. Thinking that this variability might have been due to some impurity in the article, pure specimens were obtained; but this in no way abolished the defects. During these experiments it was found that some specimens melted in five minutes, while others required, when exposed to the same heat, nearly double that time. Again, it was ascertained that those specimens which took longest to melt retained their heat longer, and became ultimately harder, than the paraffins which melted at a lower temperature. On mentioning these facts, as defects, to the manufacturer, it was found that the first was a well-known quality of paraffin, and that the maker could, in the process of manufacture, produce a paraffin having any desired melting point, from 75° to 150° F. A supply of specimens ranging from 110° to 130° F. was obtained, and a systematic series of experiments were conducted in order to ascertain the most suitable melting point. It was found that the paraffin having a melting point of 110° F. was most agreeable to the patient, but that the splints formed of it were soft, as long as it was kept at the temperature of the body. The high melting-point paraffins made the hardest, firmest splints, but their application could not be borne by the patient in consequence of the heat. Under these circumstances one of two courses was necessary: either to discard the paraffin having a high melting point, or to alter the mode of application. At that time the paraffin was merely brushed over the surface of the bandages after they had been applied to the limb, consequently the limb received the heat, and became painful if a paraffin with a melting point of 130° F. was used. Another disadvantage of that method of application was, that the bandages were very apt to receive only a superficial coating of paraffin, which formed a crust over the surface and was apt to crack when cool; this was most likely to occur if cotton bandages were used. After many different plans were tried, it was found that soaking gauze bandages in the paraffin and applying them to the limb as an ordinary roller obviated the difficulty of causing the patient to feel the heat, and at the same time it produced a much firmer and more compact splint than the old method. If a semi-elastic bandage is required, the surgeon should order the manufacturer to forward a paraffin with a low melting point, say 110° F.; but if he desire a firm immobile splint, let him order a paraffin with a melting point of 130° F. It should be perfectly pure; those having an odour of naphtha are not so, and consequently ought not to be used. It is the ordinary commercial solid paraffin which is supplied. It is formed in blocks, and is a perfectly odourless, translucent or whitish neutral solid substance. In this state it remains for any length of time without suffering from atmospheric exposure; water or moisture has no effect upon it; in fact, it is almost indestructable except by burning.

When the paraffin is required for use, the first step is to liquefy it. In order to hasten the process of liquefaction, the block should be scraped down with a knife or broken into small pieces with a hammer. It may be liquefied in various ways, but the simplest and most cleanly is to place the paraffin in a vessel which should then be immersed in another containing boiling water. These two vessels may be placed on a table with something covering them, and, if well managed, the paraffin will be found melted in from ten to fifteen minutes, or even less. The gauze bandages, previously rolled and ready for application, should then be dropped into the melted paraffin, and in five minutes they become saturated. They are then lifted, the superabundant paraffin gently pressed from them, placed on a plate, and when sufficiently cool to be handled by the surgeon he takes them up and applies them to the limb. The nurse may have the bandages quite ready for the surgeon, who has then only to apply them to the part. A dry gauze bandage ought first to be applied to the limb, to prevent the paraffin bandage from adhering. If a very firm splint is desired, a coating of hot paraffin may be brushed over the bandage after two or three layers of the roller have been applied to the limb,—just in the same way as one would do in making a starch bandage, in which case he would apply a starched roller first, and then rub a quantity of starch round the limb before applying a second. The splint begins to cool in a few minutes after application; but the cooling may be hastened or retarded at will, by allowing or preventing a free current of air to play over it. In about fifteen minutes to half an hour it will become firm and solid. The bandage spoken of may be made of ordinary coarse gauze, or of any thin loose material which will form a framework for and retain a quantity of the paraffin in its meshes. If the splint be required for a compound fracture, the antiseptic gauze may be used, and in this way an antiseptic, or at least a neutral, splint may be obtained. If windows or apertures be wanted, these may be cut out with a pair of ordinary dresser's scissors immediately after the splint has been adjusted, before it is quite solid. If, for any purpose, a splint is required to be removed from a limb, this may be done while the splint is still warm by a pair of dresser's scissors. Holes may be punctured in the splint and the apparatus readjusted, and afterwards held firmly together by a lace. After the splint has become firm and solid it may be cut with a sharp pocket-knife, though this is not so easy as cutting with scissors while the splint is still soft.

Paraffin splints do not shrink or contract on the limb in the same way as starch and plaster-of-Paris bandages do. This at first sight might seem strange, as every body contracts as it cools, and paraffin forms no exception to this rule. But this apparent contradiction may be explained by bearing in mind that the first part to cool is the external layer, the internal being kept warm both by its own heat and the heat of the body, so that the cooling will take place from without inwards, and the contraction will take place towards the outer layer. As a consequence of this fact, the bandages should be applied with the firmness which it is necessary to maintain. If any doubt remains regarding the amount of pressure exercised, the surgeon will be able in a few minutes to see the result of the pressure on the extremity of the limb.

The hands of the surgeon will get smeared with paraffin, but this can easily be removed by washing them in hot water. Before touching the melted paraffin, if he rubs his hands over with glycerine, the paraffin will not adhere in the same way. A piece of india-rubber sheeting or a newspaper should be placed under the limb to catch any drops of paraffin which may fall. If the paraffin is allowed to cool, it will then scale off from these articles, and very cleanly so from the india-rubber sheeting. If any drops fall on the clothing, they will brush off if allowed to dry, or if the article be placed in hot water the paraffin when melted will rise to the top of the water. All scraps of paraffin may be collected and kept for future use. When the splint is for no further use, it may easily be removed by cutting it off with a sharp knife or a strong pair of scissors. If it be on a limb, it can be immersed in hot water, and when it becomes pliable it may be easily removed. After it has been taken off the limb, the bandage should be plunged into hot water—boiling water,—when the paraffin will rise to the top and float, while the bandages and any dirt which may be on the paraffin will fall to the bottom. The dish should be permitted to stand until the water cools, when the paraffin may

be removed in shape of a solid cake. It is thus ready for use a second time. In this way it may be used again and again.

Not only is it of use for ordinary splints, but it may be formed into any conceivable shape. Sayre's ideas regarding spinal bandages may be admirably carried out in paraffin. After the bandage has been applied during suspension, the jacket may be cut up the side, holes punched in it, and the apparatus may then be taken off and put on at pleasure, it being laced like a pair of stays. It may be taken off at night, if that be desirable, and it permits of the performance of the ordinary ablutions which add greatly to the patient's comfort. If in any case it is necessary to make the inside of a splint impervious to moisture, a mould of the limb ought first to be taken by applying the paraffin bandage in the usual way, then cutting it up, and brushing the inside and cut margins with paraffin. Such a splint will then resist the imbibition of discharges, and the wounds in the limb may be syringed out without detriment to the splint.

To summarise: Paraffin, as a material for the formation of splints, possesses the following advantages:—1. It is always ready for use. It may be kept for any length of time without spoiling or undergoing change, unless it is exposed to heat. 2. It is easy of application, requiring no special training or dexterity, and it may be ready for the surgeon about fifteen minutes after he has ordered it. 3. It sets readily, and yet not too soon. Starch and glue take a much longer time to harden, glass longer still, while plaster-of-Paris sets too quickly for many purposes. 4. Before it sets it may be cut with a pair of scissors and afterwards with a sharp knife. 5. It may be made into a splint quite impervious to discharge or moisture of any kind. 6. It is light, easy, and comfortable to the patient. 7. It may be formed into a semi-elastic bandage, or a firm solid splint. 8. It may be used many times. After one splint is finished the paraffin can be remelted and reapplied.

Regarding its defects, the one usually spoken of is its liability to ignite. This fear is founded on the idea people entertain of the inflammability of paraffin oil; but block paraffin has quite a different character. When pure, all the naphtha has been removed from it. A spark or a lighted match will not set it on fire. If it be thrown into the fire, it will burn like grease, but the splint will not ignite from any ordinary circumstance. There is no likelihood of any atmospheric temperature in this country affecting splints made from paraffin having a melting-point of 130° F.; and for use abroad a paraffin having even a higher melting-point may be obtained. In melting the paraffin, if it be done in the way described, by boiling water, there can be no possibility of it igniting. As paraffin candles—which are not pure paraffin, however,—are obtainable in most villages where pure block paraffin cannot readily be got, experiments were tried with "Young's silver paraffin candles," and they were found to make a firm splint, which might be used in an emergency.

Paraffin would make an excellent addition to the army surgical stores; it is light to carry, it is not easily injured or destroyed, it will float in water without damage, and can be formed into any kind of splint.

Glasgow.

SURGERY IN BULGARIA.

BY A. IRWIN BOLTON, A.B., M.B., &c.,
MEDICAL OFFICER TO THE DANUBE AND BLACK SEA RAILWAY COMPANY.

I BEG to forward the notes of two interesting cases of excision of joints for publication in THE LANCET. These cases were two out of some thirty-five others of wounds inflicted during the massacres last year at Gargalick and Mongolia.

CASE 1.—Stitcho, aged nineteen, Bulgar, came under my care on June 26th, 1877, suffering from a bullet wound of the left shoulder-joint, accompanied with severe inflammation of the joint and general febrile symptoms. The patient was in a very weak state, owing to distress and privation. The injury was inflicted two days previously by a band of Circassians and Bashi-Bazouks who attacked his village, Gargalick. The wound, large enough to admit my little finger, was situated in the space between the inner fibres of the deltoid and superior fibres of the pectoralis major muscles. It took a direction backwards and slightly upwards. By most careful examination I could not discover any bullet, but I found that the head of the humerus was damaged very considerably. Passing a long bent probe into the wound, it passed through the joint and far back under the scapula without meeting with any resistance. Seeing that this was a case for operation, but that the man's health was at a very low standard, I decided to wait some days until I had subdued the more acute inflammatory symptoms, and had strengthened his constitution somewhat by means of nutritious food, rest, &c.

On July 29th, the patient's condition was as follows:—General health improved; cheerful; shoulder-joint painful on motion; a sero-purulent discharge continually oozing from the wound; exuberant granulations around the wound; muscles of the joint very rigid; probe enters as before; no intimation of the seat of the bullet.

I now resolved to operate. I first introduced under the skin of the left pectoral muscles some solution of morphia (half a grain), and in about seven or eight minutes afterwards I began the administration of chloroform and ether mixture (equal parts of each) by inhalation. The patient was quickly brought under the influence of the anæsthetic. I now began my incision a little below and to the inside of the acromion process, and carried it down to the insertion of the pectoral tendon. This incision passed through the bullet wound. I then carefully deepened the wound until I came upon the long tendon of the biceps. Passing a blunt hook under this, I endeavoured to draw it to one side, but it came away easily, having been previously divided by the bullet in its entrance. I now, after dividing the capsule, took hold of the elbow and lower part of the arm, and by rotating the head of the humerus a little inwards and downwards, at the same time drawing the elbow upwards and backwards, the bone presented through the wound. I now applied Butcher's saw, and removed the head and a portion of the neck of the humerus. I then brought the humerus into its natural position again. Some two or three small arteries required twisting. I searched in vain for the ball. It seemed to have taken a direction back and round under the scapula. I washed the wound out with a solution of carbolic acid (1 to 30); inserted a drainage-tube, one end protruding from the upper, the other from the lower end, of the wound. The remainder of the wound was brought together with carbolised catgut sutures; a pad (carbolised wool) was placed in the axilla, and the arm brought to the side and retained there by long strips of adhesive plaster extending from the spine (horizontally), round the thorax and arm, to the sternum. Pads of carbolised lint were laid over the wound, and a solution of carbolic acid (1 to 40) was constantly dropped on the lint, and also syringed down the drainage-tube twice a day. Patient was twenty-eight minutes under the influence of the mixed narcosis. During the operation he never had a spasm or twitch of any kind, and, now and then, he opened his eyes and spoke quite rationally. When asked if he felt any pain, he said, "No, I only feel something dragging at my shoulder." The head of the humerus I found scooped out, on its inner side, by the bullet, which had passed through it, and the remaining portion was in a state of advanced caries.

August 1st.—Wound apparently united, except at exit and entrance of drainage-tube. Removed tube; slight discharge from lower opening. Continued treatment. Patient allowed to get up.

Patient daily continued to improve, and on Nov. 12th was discharged home. At this date his condition was as follows: Stout and healthy; shoulder to all appearance as the other, except slight flattening of the deltoid; joint stiff but full; humerus appears united to the glenoid cavity by bone. Can bear any amount of pressure on the deltoid. No opening anywhere, and no bullet found.

Feb. 19th, 1878.—Patient visited me. Joint stiff, but he can use the arm well, having acquired immense accommodatory motion of the scapula upon the thorax. There were no symptoms indicating the presence of a bullet anywhere. Very slight difference in appearance between the two shoulder-joints.

June 4th.—Patient again visited me, in perfect health, and with excellent use of arm. There is no motion between the humerus and glenoid cavity.

CASE 2. *Excision of Elbow (partial).*—Abdullah, aged twenty-five, a Tartar, was brought to me on the 5th August, 1877, suffering from bullet-wounds (three in number) of the

left upper arm. Of these, No. 1 was situated on the inner and anterior surface of the left elbow-joint, just above the inner condyle; it took a direction backwards and upwards. No. 2, bullet-wound; point of entrance on the outer side of middle of left upper arm. No. 3, bullet-wound (point of exit of No. 2) of inner side of left upper arm, just below axilla. The bullet which inflicted No. 1 wound had passed into the elbow-joint and fractured the lower end of humerus, dividing the inner from the outer condyle. On patient's arrival he was feverish and weak. Temperature 102°. These wounds were inflicted by Bulgars some eight days ago, since when he has had nothing applied to them except some old dry rags and finely-cut tobacco. I cleaned out the wounds, and well washed them with carbolic acid solution (1 to 30).

On August 6th, at noon, the patient having rested, I inserted some solution of morphia (equal to three-quarters of a grain) under the skin of the left pectoral muscle, and in ten minutes afterwards I began the inhalation of chloroform (simple). The patient almost at once passed under its influence. I then made an incision about three inches long, beginning it from just above the inner condyle and carrying it through the wound caused by the bullets. Then I inserted a knife, and carefully divided the ligaments. A second incision I made on the outer aspect of the joint. Then I inserted the blade of Butcher's saw in front of the humerus, above the extent of the fracture. Having fixed on the frame of the saw, I cut through the bone from before backwards. I now easily removed the fragments, which were in a state of caries, and found the bullet lodged in the bone at the root of the inner condyle. Slight bleeding occurred from the divided anterior ulnar recurrent, but this was arrested by twisting. The cavity was now well syringed out with carbolic lotion (1 to 30), and a drainage-tube inserted, the ends hanging out of the joint, one on either side. Both wounds were stitched together with carbolised catgut. Carbolised wool and gauze and paper were applied over both wounds. Patient was put to bed with the arm, resting on a soft pillow, bent to an angle of 55° to 60°. He had no spasm and felt no pain of any kind during the operation, which lasted thirty-five minutes. He was sensible for the greater part of the operation, and answered correctly all questions put to him. He says he felt a sense of dragging in the arm during the operation.

8th.—Patient complaining of pain and heat of elbow. Removed all dressings. Slight purulent discharge. Injected wound, and through drainage-tube some solution of carbolic acid (1 to 30), then applied pads of lint, soaked in the same solution, over the wound. Fixed arm to the pillow with bandages. Applied *constantly* a solution of carbolic acid (1 to 40) to the parts over wound.

20th.—Patient doing very well. Wound united except at entrance and exit of tube. Removed tube and syringed passage with carbolic solution (1 to 30). Again applied pads of lint, and ordered patient to keep them constantly moist with the solution. He rapidly recovered, but I kept him under observation lest he might displace the position of the joint, which I had secured by means of an angular splint applied along the inner side of arm and forearm.

On Nov. 12th I sent him home. The joint solid throughout, but with slight power of extension and flexion.

March 1st.—Patient visited me strong and well. Joint quite filled in; in parts rather an overgrowth of bone. Has considerable power of flexion and extension. A partially-formed false joint must have ensued in this case.

Kustendje, Bulgaria.

A CASE OF

THREE HARD MASSES OF COCOA-NUT FIBRE FOUND AFTER DEATH IN THE STOMACH OF A LUNATIC.

BY WILLIAM H. HIGGINS, M.B.,

ASSISTANT MEDICAL OFFICER, LEICESTERSHIRE AND RUTLAND LUNATIC ASYLUM.

IN December, 1862, J. F——, a male patient, aged thirty-five, was admitted into this institution labouring under chronic mania of three years' duration. He died on the 11th inst., and the autopsy seems to me worthy of being recorded, as I have nowhere seen mention made of a similar case.

On sectio abdominis the stomach appeared considerably enlarged, *in situ*, and on being opened, the walls were found much thickened, but free from disease; it contained no food, but three hard black masses of rounded form disclosed themselves to view, lying end to end along its greater curvature. Together the three weighed thirty-seven ounces. The hypertrophied stomach alone, when empty, weighed eleven ounces. These masses, black without from the action of the acids of the stomach, and brown on section, present a fibrous appearance, and consist throughout of fibres of cocoa-nut matting intimately compressed and spirally rolled up into hard, firm, rounded bodies. No. 1, the largest, lying in the greater end of the stomach, is six inches long, three inches thick, and weighs sixteen ounces and a half, resembles a thick roll, rounded at the end near the cardiac orifice, and truncated obliquely and slightly concave at the other end, where, it is contact with No. 2, a globular mass, the size of a large orange, flattened at the poles, three inches and a half in broad diameter and two inches in polar diameter, weighing eleven ounces and a half, evidently owing its globular form to rotation (by physiological action during digestion) between the ends of No. 1; and No. 3, a mass of irregular form, four inches and three-quarters long and two to three inches thick, weighing nine ounces, round at the end lying near the pylorus, concave where it touched, and, as it were, forming a shallow socket for the intermediate globular No. 2 to rotate against. The liver weighed thirty-five ounces, was universally ochrey in colour, and of nutmeggy appearance on section. The gall-cyst was normal; no calculi in it.

The disease that proved fatal was cancer (encephaloid and scirrhus) of the head of the pancreas, weighing with the latter twenty-two ounces, connected to surrounding parts. There was secondary cancer of mesenteric glands.

History of patient.—Since he had been an inmate (i.e., for fifteen or sixteen years) he had been observed to have a constant habit of putting rubbish into his mouth, and of eating the fibres of the cocoa-nut matting laid down in the ward, shreds of mops, and the fluffy sweeping of the floor. He had ever an anæmic appearance, but did not complain; used to work on the farm and in his ward, and never seemed to ail anything. Ate his food regularly, but during the last eight or ten years he was observed to sleep on his face, or to assume a posture on his arms and knees in bed, manifestly to relieve the pressure of the three masses upon the parts behind the stomach. About four months ago he was seized rather suddenly with a severe attack of indigestion, vomiting, and purging of clay-coloured stools, pain in the abdomen, &c. Under treatment these icteric symptoms disappeared, and he was up and dressed for about one month. He soon became dropsical and sank. He had long evinced great impairment of mind; was reticent, and no reliable or pertinent replies could be elicited as to his sensations. During life the lumps were, from the icteric symptoms, attributed to enlarged liver.

Birkenhead.

NOTE ON THE EXCISION OF THE PHALANGEAL JOINTS.

BY ENGLEDUE PRIDEAUX, L.R.C.P.I., M.R.C.S.E.,

LATE RESIDENT SURGEON AT THE SCARBOROUGH DISPENSARY AND ACCIDENT HOSPITAL.

IT may be thought that the subject of this note is of very little importance; but we should attach almost as much importance to the best modes of treating minor complaints as to those of treating major ones, and although the fingers are comparatively small parts of the human body, they are relatively very useful and important ones, and should not be neglected. A stiff finger to a labouring man, especially when engaged in certain occupations, often means inability to earn his livelihood, and after an injury to his finger almost necessitating amputation, when he begs to have it left, and makes light of its probable stiffness, that result often causes him to return to have it removed after all, as he finds it would be better to be without it than let it impede him in his daily labour.

No doubt this consideration affects those cases which so often occur of the amputation of a finger for joint disease. It is true, if the finger be left to itself, after a time, longer or shorter as the case may be, anchylosis may take place, but it is after a time during which the possessor has been incapable probably of earning his living, whilst in his attempt to do so the finger has received all kinds of rough treatment, its condition thereby being aggravated. The result, after this long and painful waiting, is a finger utterly useless in most cases to its owner; and one cannot wonder, looking at these circumstances, that it is deemed better to amputate.

Now what I want to call attention to is that there is a far better plan than either of these, that results, in a comparatively short time, in a finger slightly shortened, but with a good movable joint, thereby saving a very useful member, and preventing the deformity that ensues from amputation: I refer to excision of the affected joint. Resection of the finger-joint is as applicable and as useful in proportion as resection of the knee-joint, and yet how often does one see what might be made a good and useful finger amputated for disease of one of the phalangeal joints, simply, I think, because attention has not been called to the preferable way of treating them by excision, and it does not occur to those who amputate. It may be considered a very trivial matter, but every detail in surgery has its importance, and cannot afford to be neglected; and to those whose fingers are the means of their livelihood the question of amputation or excision is to them often a matter of pounds, shillings, and pence. In the majority of the text-books of surgery I find no mention of the subject. Erichsen says, "Disease of the phalangeal articulations usually leads to amputation of the affected finger." Bryant, in his "Practice of Surgery," mentions excision of the phalangeal joint in the thumb as leading to good results, but does not mention the fingers, except in directions to obtain anchylosis with a curved finger instead of a straight one.

The operation for resection of a phalangeal joint is very simple. A vertical incision over the dorsal surface of the joint should be made, taking care to avoid the extensor tendon; then the heads of both bones should be exposed, and cut off cleanly with a pair of cutting bone-forceps, taking care to injure the extensor tendon as little as possible; the wound should be then closed with sutures, except a very small opening for drainage; the finger placed upon a straight splint, and passive motion adopted in from ten days to a fortnight.

I append the following brief notes of a case in which the result of the above treatment was most encouraging. F. G——, a French polisher, came to me in June, 1877, asking me to remove his finger, the first finger of the right hand. On examining the finger I found the whole of it swollen up to about double its natural size, œdematous and dark-coloured. He was unable to move it on account of its condition and the intense pain it gave him, which also prevented him from sleeping at night. There was a sinus by the side of the first phalangeal joint, from which oozed most offensive pus, and a probe passed into the joint struck against bare bone. There appeared to be total disorganisation of the joint, the first and second phalanges rubbing together with a grating feeling, as of two pieces of lump sugar. He had had the finger upon a splint, and it had been treated with lotions &c. for some time, and his medical attendant had advised him to have it removed. I made a vertical incision, found the heads of both bones completely denuded of cartilage, and removed them, taking care to injure the tendon as little as possible. I then closed the wound, placed a very small piece of twisted carbolised tissue in it as a drainage-tube, dressed it antiseptically, and placed the finger upon a splint. At the end of a week the wound was healed. After about ten days the patient was shown how to use passive motion, and at the end of a month he had a good serviceable finger, which he was able to use almost as well as any of the others.

THE deaths registered in London last week numbered 1433, representing a mortality-rate of 20·9, against 22·1 in the week ending the 17th inst. The death-rate from diseases of the zymotic group was 5·0 per 1000, also a considerable decrease on that of the week previous. There were 10 fatal cases of small-pox, 24 of scarlet fever, 10 of measles, 11 of diphtheria, 74 of whooping-cough, 16 of different forms of fever, and 195 of diarrhœa.

SUCCESSFUL OPERATION FOR STRANGULATED HERNIA IN THE MALE, AFTER TEN DAYS' STANDING.

BY WELLINGTON N. CAMPBELL, M.D.,
LATE HOUSE-PHYSICIAN AND SURGEON TO THE 99TH STREET HOSPITAL, NEW YORK; LATE AMBULANCE SURGEON TO BELLEVUE HOSPITAL, ETC.

ON the morning of the 22nd of December, 1877, I was called to see W. W. B——, aged fifty-three years, painter, and found him suffering from a tumour in his left groin, which, on examination, proved to be a strangulated hernia. The patient stated that the rupture first appeared about eighteen months before, after lifting some heavy merchandise upon a truck, but he had always been able to reduce it by lying in a prone position and performing taxis up to the 12th of December, 1877. When painting at a height that required an effort to reach he found that it had suddenly enlarged, and from which he experienced special pain for the first time. Upon going home he performed taxis, as usual, in the prone position, but was unable to return it. He vomited from this date (12th) to the 17th, when he took two cathartic pills, and placed a mustard plaster over the tumour; but finding no relief he applied to a physician in Jersey City on the 18th (at which time he had stercoraceous vomiting), and was advised to go to the hospital.

He came to New York on the 19th, and I saw him on the 22nd. I found him prostrated from protracted efforts to vomit, and deemed it unadvisable to use prolonged taxis in attempts to reduce it, on account of its having been strangulated for so long a period. Having called to my assistance Drs. Dennis, Williams, Schapps, Crawford, and Bargar, of this city, we immediately proceeded to etherize the patient, and when under its influence performed gentle taxis, but being unable to reduce the hernia, we proceeded to the operation without delay. Upon cutting down to the sac we found it deeply congested, being of a reddish-purple colour, and from the fact of strangulation having existed for so long a time we thought it safer to enter it, when we found, as we had previously diagnosed, an entero-epiplocele; a coil of the sigmoid flexure of the colon was enveloped by a segment of the omentum, and was of a purplish colour; but no signs of decomposition were perceptible, and there was scarcely any serum in the sac. The protruding mass was tightly grasped by Gimbernat's ligament. The stricture was divided by cutting upwards and inwards, and the contents of the sac returned with but little difficulty. Having cleansed the wound thoroughly, three interrupted carbolised silk sutures were applied, leaving the most pendant portion open for drainage, then a compress dipped in tepid water enveloped by a spica bandage. One grain of opium was administered every two hours during the night, and every four hours during the day as occasion required, until the 25th.

On the day following the operation (23rd) the pulse was 72, the temperature 99·25°. On the 24th the pulse was 70. On the 26th, the bowels not having moved, an enema of oatmeal gruel and castor oil was given, which produced a movement that evening. The patient was kept on a fluid nutritive diet, consisting of corn-starch and arrowroot, farina, barley-water, and ice for a day or two, then allowed beef-tea (cold). The sutures were removed on the fourth day, and a poultice of linseed-meal applied daily for three days, then renewed the warm water dressing with spica bandage, the limb being flexed and retained in that position to relieve all tension. There were no signs of any peritonitis, except slight tympanites, which, I presume, was due to the opium administered, and which readily yielded to the application of turpentine stupes applied over the abdomen. On Jan. 13th, 1878, the wound was healed, and the patient walking about feeling perfectly comfortable.

The peculiarities of this case are, as will be perceived, as follows:—1st. The fact of its being a femoral hernia in a man. 2nd. There being no gangrenous condition of the intestine, even after ten days' strangulation.

New York.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

FEMORAL HERNIA STRANGULATED FIFTY HOURS; OPERATION (SAC NOT OPENED); RELIEVED.

(Under the care of Mr. BRYANT.)

THE following notes were taken by Mr. J. T. J. Morrison.

Sophia G——, aged fifty-two, a married woman and the mother of twelve children, was admitted into Lydia ward on the 21st August, 1877. She had always been of a delicate constitution, and two years before was laid up for some weeks with a severe attack of rheumatism. It was during this illness that she first noticed a small lump in the left groin, not much larger than a marble. The lump persisted, although its size varied at times. The patient was not aware of its nature, and had never worn a truss. On August 17th, after a good deal of hard work, she was led to examine the swelling in the groin on account of pain about the part, and then found it had increased to the size of a walnut. Since then the tumour had gone on increasing in size, and at the same time the pain had become of a more severe character, causing much distress. On August 19th a medical man attended her and ordered her to take some castor oil, but no relief followed; and the next day, finding that the patient had a femoral hernia on the left side, he attempted to reduce it by taxis, but was unsuccessful both then and on the following day; and she was advised to obtain admission into the hospital. There had been a scanty hard motion on the 19th, and on the same day obstinate sickness set in and continued, the vomit being of a bilious character.

When admitted, the patient was a thin, ill-nourished woman, with an anxious expression of countenance. There was a smooth tense swelling, as large as a hen's egg, in the left groin, having the character of a strangulated femoral hernia. Strangulation had existed for about fifty hours. Chloroform was administered, and an incision was made, an inch and a half long, through the skin, over the middle of the tumour, and the successive coverings were divided until the sac was reached. A director was then inserted beneath the constricting band at the neck of the sac, and the constriction divided by means of a scalpel; the protruded intestine was then easily returned into the peritoneal cavity. Several vessels were twisted, and the edges of the wound brought together by silk sutures. A firm pad of dry lint was secured over the wound by a spica bandage. At 6.30 P.M. it was found that blood was oozing through the bandage, and the house-surgeon reopened the wound and ligatured a bleeding vessel, and the hæmorrhage then ceased. One grain of opium pill was ordered every four hours.

On the 22nd the temperature was 98° and the pulse 80. The patient had been sick once since the operation. There was no abdominal pain or tympanites. Flatus passed per rectum. On the 24th it was noted that the bowels had been opened naturally, and without causing any pain. Opium pill to be taken twice a day. Temperature 98·3°; pulse 84. Next day the sutures were removed. The wound had healed by first intention at the upper part, but there was a slight amount of purulent discharge from below. Temperature 99°; pulse 84.

On Sept. 13th she felt much stronger, was without pain, but complained of flatulency. She was able to take a little meat for dinner. On the 22nd the healing process had gone on so very slowly that powdered iodoform was applied.

On Oct. 6th the wound had healed, and the patient was able to bear the truss, to which she had become gradually accustomed. She left the hospital well.

FEMORAL HERNIA STRANGULATED SEVENTY-TWO HOURS; OPERATION (SAC NOT OPENED); RELIEVED.

The following notes were taken by Mr. Hitch.

Susan H——, aged forty-one, of good family history, was admitted into Lydia ward on Nov. 7th, 1877, with strangulated femoral hernia. Her family history was not good. Most of the members of her family had suffered with chest complaints, four sisters having died of consumption. She herself was married, and was the mother of seven children, the youngest being three years and a half old. One girl was a patient in St. Bartholomew's Hospital with diseased bone in her foot. The patient had suffered from cough for five years, and about two years ago she was said to have hæmorrhage from the lungs; she had several times since then spat blood. About the year 1875, after coughing, she noticed a swelling just below the right groin, and since then she had always felt pain down the inner side of the right leg to the foot. She was sick at the time, but said nothing about the swelling to anybody. The hernia did not keep up, although she was able to return it. Three days before admission she was sick, and her bowels were slightly open; the sickness continued. On admission she had a lump just below the right groin external to the spine of the pubis; it was very tense. The hernia had been strangulated for seventy-two hours.

Chloroform was administered and taxis was applied without any good result. An incision was then made, about two inches long, over the swelling and down to the sac containing the bowel. The sac was not opened; it was about an inch and a half long, contracted at the middle by a band of fibres; this band was cut, and Gimbernat's ligament was then divided, and the bowel returned with the usual rush. The flaps were brought together and secured by a suture; a morphia suppository was then introduced into the rectum.

Nov. 8th.—She had not been sick after the operation, her bowels were opened twice very soon after the hernia was returned, and she felt very comfortable. She was ordered a one-grain opium pill every eight hours. She progressed favourably; the wound was healthy. The pills were discontinued on the 12th. She took milk and beef-tea.

On the 16th she seemed comfortable, and was allowed chicken. On the 19th she was ordered quinine mixture. She was very comfortable. On Dec. 7th, as her bowels had been very constipated, it was necessary to give her enemas. Confection of senna generally relieved her bowels. On the 13th the wound had healed. She wore a truss and experienced very little discomfort. The next day she left the hospital.

GREAT NORTHERN HOSPITAL.

EPITHELIOMA OF RECTUM; EXTIRPATION; RECOVERY.

(Under the care of Mr. W. HARRISON CRIPPS.)

THE patient, a woman aged sixty, was admitted into the hospital in April last. She was very emaciated and feeble, and had a sallow, cachectic look. For a year and a half she had suffered great pain in the rectum, and during the last few months the pain had increased to such an extent as to rob her almost entirely of rest. She had frequent desire to go to stool, but most times passed only a small quantity of blood-stained fetid mucus. Diarrhœa alternated with constipation, and the passage of hardened fæces after the periods of constipation caused great aggravation of the distress and suffering. Occasionally large quantities of blood were passed.

Upon examination a hard ulcerated mass could be felt in the rectum; its lower margin was about three-quarters of an inch within the anus, and its upper about three inches, the mass being about two inches long. It involved rather more than two-thirds of the circumference of the rectum at its lower margin, and somewhat less at its upper. Digital examination caused great pain and much hæmorrhage.

The case having, after full and deliberate consideration, been judged a fitting one for extirpation, and certainly fatal, sooner or later, if left to itself, it was resolved to try the chances of operation, in the hope that a successful issue would not only rid the poor woman of her actual suffering, but give her a prospect of an easier and a longer life.

After having been duly prepared for operation she was anæsthetised, and placed in ordinary lithotomy position. A strong curved bistoury, guided by the fingers, was passed a couple of inches within the rectum, with the point directed backwards. The point was then made to transfix the posterior wall of the bowel, and to emerge through the skin close to the tip of the coccyx. The intervening tissues between the aperture of the anus and the coccyx were then freely cut through by a strong sweep of the bistoury exactly

in the middle line. Very little bleeding followed this cut. A curved incision was then made on each side of the anus, just within the external sphincter, through the wall of the rectum into the subrectal fat. By means of the finger and the sparing use of the benzoline cautery the lower portion of the rectum was cautiously and slowly detached from the adjacent structures, the separation being carried higher behind than in front. When the separation was sufficiently advanced, the bowel was gently drawn downwards and then severed just above the diseased growth by means of the benzoline cautery.

No attempt was made to fix the divided edge of the gut to the margin of the anus. The hæmorrhage, slight throughout, was effectually arrested by a few catgut ligatures. No dressings of any kind were applied.

The patient convalesced without a bad symptom. In about three weeks she had regained complete control over the sphincter muscle, and left the hospital quite well seven weeks after the operation. She gained considerably in weight, was entirely free from pain, and the bowels acted regularly without difficulty.

The growth, after removal, was, on microscopic examination, found to be a typical specimen of the so-called tubular form of epithelioma, but which appears to be a reproduction of Lieberkuhn's follicles in the submucous tissue, with a large amount of retiform tissue lying around and between the new follicles. This same form of growth is often found as a secondary deposit in the liver.

Remarks by MR. CRIPPS. — In my Jacksonian prize essay for 1876 will be found a detailed description of the various methods of performing this operation employed by Maisonneuve, Verneuil, Recamier, and others; the galvanic cautery, ligature, and écraseur being used, singly or variously combined with the use of the knife. From my own experience of the operation, I am inclined to believe that little advantage is obtained either by the ligature or écraseur. They convert a simple operation into a long and complicated proceeding; they do not prevent hæmorrhage, and, above all, give far less certainty of removing the whole disease than can be obtained by the knife combined with the sparing use of the cautery. The preliminary incision through the posterior wall of the rectum as far as the coccyx immensely facilitates all the further stages of the operation. It unfolds the parts, and gives plenty of room for subsequent manipulation, enabling all bleeding vessels to be effectually secured. The dissection of the posterior wall of the rectum from the coccyx and sacrum is easily accomplished by the forefinger and scissors. The dissection of the anterior wall from the urethra or vagina requires to be conducted with considerable care, to avoid wounding either of these structures. A sound in the urethra, as employed by Mr. Allingham, is of great service in this dissection.

The length of interval after removal of the disease before a return may be expected would here, as in other parts of the body, vary much according to the nature of the cancer. On reference to a considerable number of cases, the prognosis appears to be quite as good as in operations for cancer in other parts of the body. When recurrence does take place, it not uncommonly returns in internal organs, the patient escaping the intense suffering caused by the local disease. The instances of rectal cancer within reach of operation, unfortunately, bear only a small proportion to the total number of cases in which the disease affects these parts; but, doubtless, in a certain proportion of cases, the patient can be completely relieved by operation of one of the most distressing forms of malignant disease.

LIMERICK UNION HOSPITAL.

REMOVAL OF FIBROUS TUMOUR OF THIGH OF SIX YEARS STANDING.

(Under the care of Mr. RUSSELL.)

MARGARET F——, aged twenty-four, married, was admitted with a large tumour of the upper and anterior surface of right thigh.

The history of the case showed that about six years previously she first noticed a "kernel" there. It had never given her any trouble until about six months ago, when it began to enlarge. This enlargement was attended with pain, so that at the time of her admission she was totally unable to use the limb.

On examination the tumour appeared to be lobulated, the skin over the largest and most prominent lobule presenting signs of ulceration.

On July 25th the patient was placed under chloroform, Petit's tourniquet being loosely applied on the limb above the tumour. A Y-shaped incision was made in the skin, the flaps deflected, and the tumour brought into view. The growth consisted of four lobes, joined together, surrounded by a dense glistening capsule. They were then removed, the handle of the knife being used to tear the adhesions asunder. A few arteries spouted, but were easily secured and twisted. The cavity having been sponged out with carbolic lotion, the flaps were brought together and secured with interrupted sutures, lint being then applied steeped in the lotion, a roller bandage was placed over all. Not a tablespoonful of blood was lost during the operation.

Next day the temperature rose to 101·4°. Five-grain doses of quinine were given every third hour, and the temperature was normal on the following morning, and remained so all through convalescence. Although the attempt at antiseptic treatment was of a most primitive kind, the greater part of the wound healed by the first intention, the rest by granulation with very little suppuration.

This was essentially a connective tissue tumour, presenting all the appearances, under the microscope, of a fibro-sarcoma. The remarkable feature about it was its being so long in abeyance, and taking on such active growth in a short time. It weighed one pound on removal.

NORTH STAFFORDSHIRE INFIRMARY.

MALFORMATION OF GENITO-URINARY ORGANS.

FOR the following interesting record we are indebted to Mr. W. A. Frost, F.R.C.S., house-surgeon.

The subject of the malformation described below was a puny, emaciated infant, nine weeks old, who had suffered since birth from diarrhœa and bronchitis, and had voided all its urine per anum. The mother was subject to epileptic fits, and attributed the malformation to a fright she experienced when in the fourth month of pregnancy. The child was born at the full time. There were several other children, all without malformation.

External appearances:—An inch and a half in front of the anus was a narrow cul-de-sac a quarter of an inch deep; it was lined with mucous membrane, and at the bottom was a papilla, the size of a hemp-seed. Between this and the anus the integument had the appearance of dartos, having transverse rugæ and a distinct median raphe. Attached to the left margin of the anus was a pendulous flattened fold of integument an inch and a quarter long and half an inch wide. With this exception the appearance of the anus was normal.

The bladder was normal in every respect. The uterus reached to the umbilicus; it was dilated and filled, as were also the vagina and the bladder, with urine. Its cavity was divided into two by a vertical antero-posterior membranous septum, which did not reach quite to the fundus, but terminated in a free edge; inferiorly this septum extended into the vagina, and terminated in a free margin a little below the middle of that canal. The vagina was thus divided into two, except at its lower part; the right division admitted the last phalanx of the thumb, the left that of the index finger. Inferiorly the vagina opened by a small orifice at the anus, but its cavity was entirely distinct from that of the rectum, the two orifices being separated by the wall of the rectum, but no part of the external sphincter was traced between them. The ovaries were normal. The urethra was five-eighths of an inch long, and was directed downwards and slightly backwards. Below it opened on the anterior wall of the vagina, a quarter of an inch within the anus. The rectum was normal. The ureters were the size of adult brachial arteries, their orifices being normal. The kidneys were normal in external appearance. The pendulous fold above mentioned was on a level with the orifice of the vagina, and contained some large vessels which were traced in the direction of the ramus of the ischium. The pelvis was well formed.

During life the infant was thought to be a male, with retention of the testes, absence of the urethra, and persistence of the cloaca. On this hypothesis the depression which existed anteriorly was naturally thought to be an abortive

meatus. In reality the latter doubtless represented the clitoris and its prepuce. An instance of the urethra opening into the vagina is mentioned by Dr. J. Mackenzie in THE LANCET, 1875, vol. ii., p. 263, but no other abnormalities are noted. If in an embryo at about the eleventh or twelfth week, with the rectum just becoming separated from the genito-urinary tract, development be supposed to be arrested in the posterior part, while anteriorly it is abnormally active, the genito-urinary aperture would remain in contact with the rectum, but be separated from the clitoris by a considerable interval, as in the present instance. As to the nature of the pendulous fold hanging from the anus, from its vascularity and the direction of its vessels, it might possibly have represented one of the nymphæ. There must have been some obstacle, the nature of which was not ascertained, to the exit of urine from the vagina to account for the great dilatation of this canal and of the uterus. It would have been interesting to have dissected the muscles of the part, and especially the external sphincter, in order to have ascertained what relation it bore to the vaginal opening, but as the permission to make an examination was obtained with difficulty and accompanied by restrictions, this could not be done.

Reviews and Notices of Books.

A Practical Treatise on Aural Surgery. By H. MACNAUGHTEN JONES, M.D., F.R.C.S. I. & E., Surgeon to the Cork Ophthalmic and Aural Hospital, with Special Throat Department, &c. London: J. and A. Churchill. 1878.—This little book is the work of a general surgeon, or perhaps it would be more correct to say of a "general specialist," for Dr. Jones is attached to a general hospital as assistant-surgeon, to a hospital for diseases of women and children, to an ophthalmic and aural hospital, and, we believe, to a fever hospital. For the general practitioner, as well as for the student the advantage of possessing a work on a special subject written by one who has practical acquaintance with general medicine and surgery is very great, provided always that the writer is well up to the level of his subject. Dr. Jones is up to the level of his subject. He does not, it is true, make any pretension to originality, and is content to believe that he has not worked in vain if he has given "a concise epitome of modern aural diagnosis and therapeutics." Dr. Jones may fairly claim to have succeeded. Besides adequate descriptions of purely local affections of the ear, the book contains many illustrations of the connexion between altered states of the general health and diseases of the ear. There is a large number, perhaps too large a number, of woodcuts of various instruments employed in aural surgery. Dr. Ringrose Atkins, superintendent of the Waterford Asylum, has supplied a brief but useful chapter on othœmatoma. Unlike most modern works on aural diseases, a description of the anatomy of the ear has been omitted, and wisely so, as we think. For the other organs of the body a knowledge of anatomy is supposed to precede the study of disease; why not for the ear? unless it be to intensify the specialism of an overdone specialty.

De Militaire Geneeskundige Organisatie en de Geneeskundige Dienst te Velde. Bij Het. Engelsche Leger. Door Dr. M. W. GORI, Professor of Military Medicine in the University of Amsterdam.—This little work is one of much interest to all who make the important subject of military medical organisation a matter of study. Dr. Gori gives a history of the organisation of the Medical Department of the British Army from the date of the Royal Sanitary Commission over which the late Lord (then Sydney) Herbert presided, down to the latest changes in the constitution of the Department. The author also enters minutely into the question of the practical and special education and training of army medical officers, and gives a careful description of the system pursued in the Army Medical School at Netley, which he highly commends, and, after describing the defects in this particular in his own service, strongly presses on his Government the necessity of establishing a similar school for medical officers in the Dutch army. In this particular, following the example of Medical Inspector Dr. Dean, of the U.S. navy, who on the part of his Government made an elaborate report on the Netley School, and advised the Government of the United States to establish one on its lines, we commend what Professor Gori has written on this subject to certain would-be reformers, who think the best way to improve the Medical Department of the British Army is to abolish the only school in Great Britain where men can receive the special training required for their very special work. Dr. Gori writes in high terms of the new ambulance organisation of the British army, which he thinks in every way efficient.

Elements of Chemistry, Theoretical and Practical. By W. A. MILLER, M.D., LL.D. Revised by CHARLES E. GROVES, Secretary to the Institute of Chemistry of Great Britain and Ireland, and Fellow of the Chemical Societies of London, Paris, and Berlin. Part II. *Inorganic Chemistry.* Sixth Edition, with additions. London: Longmans.—Mr. Groves has succeeded to Professor McLeod as editor of Miller's well-known manual, and the publishers have been singularly fortunate in securing his assistance. The improvements of the last edition have been supplemented by further ones in this, and a considerable mass of new matter has been added. Mr. Groves has wisely expunged all the compounds of carbon except the oxide, and also the section on gas analysis, as belonging more properly to the third part. We trust that a new edition of this third part will be ready before long, as it is very much wanted.

A Treatise on Photography. By W. DE W. ABNEY, F.R.S., Captain in the Corps of Royal Engineers, and late Instructor in Chemistry and Photography at the School of Military Engineering, Chatham. London: Longmans.—This is another of the excellent "Text-books of Science." Every one has been good, and the present is no exception. It professes to be theoretical rather than practical, but contains a great many useful directions for work. Nearly all the more important of the many new processes which have appeared of late years are described with remarkable clearness, and, as far as possible, the theory of each explained. It has happened, however, in this, as in so many other cases, that practice has kept ahead of theory, and Captain Abney, in his preface, while lamenting this, expresses a hope that his book may be the means of inducing more workers to enter this very fruitful field. Among the few defects of the volume we must notice the absence of the Amand-Durant process, which, for certain purposes, is the best.

Outlines of Modern Chemistry, Organic, based in part upon Riches' Manuel de Chimie. By C. GILBERT WHEELER, Professor of Chemistry in the University of Chicago. New York and Chicago: A. S. Barnes and Co.—A small and somewhat meagre sketch of elementary organic chemistry. The arrangement is clear; the facts, as far as we have observed, tolerably accurate. On the whole, however, the work strikes us as inferior to several well-known text-books.

Practical Chemistry for Medical Students: specially arranged for the first M.B. Course. By M. M. PATTISON MUIR, F.R.S.E., Prælector of Chemistry, Gonville and Caius College, Cambridge. London: Macmillan and Co.—A very short and simple course, arranged in a somewhat unusual way. It is well adapted for those whose time is limited, and, like all Mr. Muir's works, is accurate.

Aids to Chemistry. Part II. Inorganic: The Metals. By C. E. ARMAND SEMPLE, B.A., M.B. Cantab., M.R.C.P. London: Baillière.—Another of Mr. Semple's "Students'

Aids Series." It is very concise, but not altogether accurate. Some facts of little importance are included, while others of interest do not appear.

Seaside Water. An Examination into the Character of the Water-supply at the Watering-places of England and Wales. By G. W. WIGNER, F.C.S., one of the honorary secretaries of the Society of Public Analysts; Public Analyst for Greenwich, Plumstead, and Woolwich Districts. London: Kent and Co.—In this small pamphlet Mr. Wigner gives an account of the water-supply in all the more important seaside resorts of England and Wales. He has examined and analysed an immense number of samples, and draws inferences from his results with good judgment. His work should be sold at every railway station, and consulted by everyone who is going to the seaside. There is great risk in drinking the water supplied at some well-known watering-places, and it is highly important for the fact to be known.

Cooley's Cyclopædia of Practical Receipts. Sixth Edition. Revised and partly rewritten by R. V. TUSON, M.I.C., F.C.S. London and Berlin, Professor of Chemistry and Toxicology in the Royal Veterinary College; formerly Lecturer on Chemistry at the Charing-cross Hospital. London: J. and A. Churchill.—The new edition of this well-known and useful book is coming out in monthly parts with commendable regularity. Professor Tuson, assisted by a somewhat numerous staff, has greatly raised the character of the work and increased its usefulness. He has not only cut out much that was irrelevant or savoured of quackery, but has inserted a vast mass of useful knowledge in all departments of pure and applied science. The book is now, indeed, far more than a mere dictionary of receipts. It is a storehouse of scientific knowledge, and will be found valuable in every house. Five parts have now appeared, and the work will be complete in about fifteen.

FURTHER MEDICAL EVIDENCE
BEFORE THE
SELECT COMMITTEE ON INTEMPERANCE.

ON the 2nd of August the fourth report (being the report of the Session 1878) from the Select Committee of the House of Lords on Intemperance was brought from the Lords, and on the 5th was ordered, by the House of Commons, to be printed. It includes the evidence of Sir Henry Thompson, F.R.C.S., Dr. Albert James Bernays, Dr. Benjamin Ward Richardson, F.R.S., and Dr. James Murray M'Culloch. Besides this, the report contains the evidence of other witnesses—magistrates, constables, &c.—of great importance. But our immediate object is to give an abstract of the medical and scientific evidence.

Sir Henry Thompson thought there were three ways in which alcohol might be serviceable, and premised that it acted always through the nervous system. He illustrated his meaning by three illustrations:—First, that afforded by an Alpine traveller on the point of exhaustion, cold, fatigued, unable to take food, and alone, and yet having another hour's walk to do. No guides being available, Sir Henry thought a glass of brandy might carry the traveller on, and save him from a fatal sleep in the cold. The second illustration was that of a man having to face a public duty—a speech, a musical or dramatic performance, and feeling a temporary sinking or want of power. A glass of wine might alter all, and enable the duty to be creditably performed. Then, thirdly, in certain wasting diseases, alcohol prevents waste, not by supplying material to the body, but by hindering the destruction of tissue. Sir Henry expressed himself strongly against giving alcohol to weakly children, thinking it particularly unsuited to children. In reference to the administration of alcohol in hospitals, he thought it was determined rather by regard to the supposed habits of patients than by medical considerations. He had never been in the Temperance Hospital. He objected to the sudden cutting off of alcohol from a man who had been accustomed to it, but would think it better for the man that he himself should give it up by gradual steps. He thought the great majority of people in health would be better without alcohol. The particular diseases induced by drinking were those of the liver, the brain, and the kidney. As to gout, "it is not the drunkard who gets gout, but the man who takes a little habitually." Sir Henry expressed himself as agreeing in the physiological views of Sir William Gull and Dr. Brunton. Asked by the Bishop of Peterborough whether persons past the age of fifty might take alcohol with greater impunity than persons under thirty, Sir Henry said, "I object to it extremely in the young, but I have not yet found the age at which I would advise it as an habitual drink." When asked to explain the extensive "craving" in most nations for something like alcohol or opium, he referred it to "a desire for producing pleasure or for getting rid of different kinds of trouble," and thought it indicated no general physical need for such things. He considered the great majority of people suffer a little prejudice by the daily use of alcoholic drinks. People living in bad houses and foul air went to public-houses from a craving for cheerfulness and society, which becomes by force of circumstances a craving for strong drink. On the subject of restriction of the liquor trade, Sir Henry said he should be jealous of interference with the liberty of the subject or with the wish of a minority. He believed that the drinking habits of the people of London depended greatly on a strong opinion as to the badness of London water. All drinking-water should be filtered before use. In places or countries where the water cannot be relied on—even in Italy—good mineral water can always be obtained. Except in times of outbreak of cholera and typhoid, the part which the consumption of water has in the production of disease is very small. Sir Henry said that he found himself better for taking no alcohol. If other persons were better for a glass of beer or light wine, let them take it; he found few such.

Dr. Albert James Bernays, Professor of Chemistry at St. Thomas's Hospital, and Public Analyst for St. Giles's, Camberwell, and St. Saviour's District Board of Works, gave interesting evidence on the question of adulteration. The worst adulteration of spirits is owing to the addition of varying quantities of water. Other impurities, such as fusel oil and the like, he had found only in very small quantities. Dr. Bernays thought that the public notion that "flavouring additions" are made to spirits in order to prevent the palate detecting the weakening from water is not well founded. He thought that the variations in the alcoholic contents are so great as to be a source of the greatest immorality. The publicans defeat public analysts by acknowledging that their spirits are mixed with water. Many spirits are brought down by this admixture to only about half the strength they should be—gin, for example—the variation being between 52 and 85½ per cent. of proof spirit. The lowest strength he had found in gin was 42 per cent. of proof spirit, or about 22 per cent. of alcohol. He thought such weak spirit did not satisfy the craving, and a "man repeats the dose" who would have been satisfied with one dose of a fair alcoholic strength. Aniseed is very variously alcoholised. In one sample he found only a trace of alcohol, in another 19 per cent., in a third 31·97 per cent. He would compel people by law to name the limits of their adulteration. Dr. Bernays said the ethers of the best wines could be made *artificially* without fermentation. Wine was a manufacture requiring a very considerable amount of skill to conduct. On the Moselle, when the vintage is very

bad, they make two butts of wine out of one—making up the difference by the addition of a proper quantity of starch sugar to give the alcohol strength, and a dilution with an equal volume of water to do away with the tartness of the wine; the quantity of cream of tartar being so large in a bad year as to make the water undrinkable. Champagne is to a large extent an artificial manufacture. An extra quantity of alcohol is put into that going to England, to suit English tastes. Ports and sherries are fairly uniform in alcoholic contents, containing on an average 36 per cent. of proof spirit. He had examined only two specimens of clarets, and there was nothing but the ordinary colouring in them. He was "thoroughly" in favour of a larger use of light wines. Admitting he was not a medical man, he maintained that a man would be positively the better for drinking a certain quantity of light wines. They contain from 20 to 26 per cent. of proof spirit. Upon the whole, the wine sold is wine, and not adulterated. He thinks an enormous advantage given to the ordinary citizen is being able to obtain wine at the grocer's. He has analysed a very great number of samples of beer and porter. Porter and beer, in Dr. Bernays' opinion, have diminished in value since permission was granted to use sugar; malt and hops have almost disappeared from the beer of inferior houses. Gentian and other things are substituted. Salicylic acid is put in as an antiputrescent. Sugar is added to make it more palatable, and inferior sugars contain salt. Salt, too, is contained in some well waters, also in malt and hops. He has modified his former opinion that salt is added intentionally to produce thirst. Dr. Bernays' chief suggestion for the amendment of the Adulteration Act was that there should be some compulsory regulation as to the alcoholic strength of spirits, and as to the quality of sugar employed in making beer.

Dr. Benjamin Ward Richardson, F.R.S., was the next witness examined. We take it for granted that our readers are already acquainted with the representation of the subject of alcohol which he gave to the committee. He described the series of alcohols and produced them, and showed how they possessed the same properties, varied by their weight, their boiling point, and their solubility. He described four stages in the action of alcohol; illustrating the vaso-motor action of it by the action of nitrite of amyl, which he inhaled in the presence of the committee. He expressed the opinion, founded on experiments on the lower animals, that delirium tremens is produced always by fusel oil, never by pure ethylic alcohol; that there is persistent dyspepsia in all persons who take wine and spirits for long, and in very slight excess indeed; the food does not undergo solution. As to the diseases commonly produced from the long-continued use of alcohol, even in moderate quantities, he would say organic disease of the stomach is the most common; after that cirrhosis of the liver with its consequences; a distinct form of phthisis described by Dr. Richardson in 1864, not hereditary, and which he called alcoholic phthisis; congestion of the throat and huskiness; epilepsy; diabetes; disease of the heart and of the kidney; dipsomania; insanity à potu, and insanity with general paralysis. He thought general paralysis, Bright's disease, and cirrhosis would cease if the use of alcohol were discontinued. Having used alcohol for many years in defined quantities, and as a medicine, he was prepared to say he could do without it altogether, and replace it by other agents, such as nitrite of amyl, &c. Sir Henry Thompson's exhausted Alpine traveller would do as well with beef-tea, or even water and a biscuit. We should all be stronger, healthier, and better, if alcoholic liquor could be tapped and made to disappear from the world. Lord Aberdare asked Dr. Richardson about the use of claret in France; whereupon Dr. Richardson, after Anstie, Parkes, and Smith, said that 1½ ounces of alcohol in the diluted form of claret might be taken safely daily. But he qualified this answer in an addendum by saying that he supposes it to be taken at different periods of the day, and by persons actively engaged in rural out-door life. To these even it is of no service; but to the sedentary it would be injurious.

Dr. Jas. Murray McCulloch gave evidence on the strength of fifty years' practice in Dumfries. He said at one time there were just fifteen adult males to each public-house in Dumfries. It is not so bad now. He said the protests of the respectable people in Dumfries had been "treated so scurvily" by the magistrates that they had ceased to be offered. Drunkenness among women had increased enormously within his knowledge, which he attributed to grocers' licences. He was most undoubtedly in favour of the total "local suppression" of the liquor traffic. He thought "his own profession" was to blame for a great deal of the drunkenness amongst females, but "the tide is turning against that practice now." He declared that Dr. Gairdner had "altogether" given up the use of alcohol in fever. (Is not this in the case of young fever patients only?) But Dr. McCulloch said "there were cases, no doubt, in which alcohol is useful."

ABSTRACT OF THREE LECTURES

ON THE POSITIVE IN REMEDIAL ART.

Delivered before the Faculty of Physicians and Surgeons of Glasgow in the Session 1878.

BY B. W. RICHARDSON, M.D., LL.D., F.R.S.

(Continued from p. 257.)

METHOD OF RESEARCH TOWARDS THE POSITIVE.

IF we would definitely trace out the reasons why there is so little of concordance in respect to the value of remedies, if we would know why there is such a modicum of basic information on the subject, we must take into our thoughts the mode in which the study has been conducted up to the present time.

In dealing with medicinal substances the fathers of medicine had in their hands bodies of the most complex construction, and down to the time of Boerhaave they had actually little conception that there was any complexity at all. As the old chemist considered water to be a simple substance, and treated of it as such, so the old physician looked on opium and other complex bodies and treated of them as simple bodies in nature. It was the same with all medicaments. As they came to the physician's hands from the natural world they were to his mind simples. The idea that they might undergo decomposition in the living body could not occur to him, nor any other idea of physical action, save and except that which he believed he had discovered respecting their specific power to cure disease, an empirical and often a mere superstitious belief,—a belief which even in this day has a firm hold on the minds of the illiterate.

But with the course of the sciences of chemistry and mechanics we have been brought to see that no certainty can be obtained by the mere empirical method, and that even when a result resting upon it is accepted as correct in practice, the mind can find no rest until it knows the why and wherefore of action. Thus we are brought to a state in which we require a new starting point of research, in which the chemical nature of the substance used shall be determinately known, and the physiological details of its action correctly defined.

It is in relation to this last topic I would now particularly wish to speak. Let me then state what, as it seems to me, are the inquiries which should be instituted to create a positive remedial art,—an art that shall be as distinctive as any other process that has been developed by and through experimental research.

The inquirer into the positive action of any medicinal substance is bound to know the following facts:—

1. The elementary composition of the substance.
2. The specific action of each element, and of the possible part which each element plays in the phenomena producible by the agent.
3. The mode in which the action of the elements is modified by special combinations of the elementary forms, especially by the combinations into radicals in the organic series of medicinal substances.
4. The influence of the agent according to its physical state or condition at the time of its administration, and according to the method of its administration.
5. The modification of action that is produced by the same agent in different classes of animals.
6. The mode in which the agent used passes through the system. Whether it is decomposed or is not decomposed in the system. And, if it be decomposed, into what it is decomposed, with the results or consequences of the change.
7. The relationship of action between bodies that are isomeric in chemical construction.

These researches may be considered as purely chemico-physical. They would lead to a succeeding research, which

may be called physiological, or physiological and pathological. In this direction the following would be the lines of research:—

1. How does the agent brought under observation affect the temperature of the body?
2. How does the agent influence the minute or peripheral circulation, and how the general circulation?
3. How does the agent affect the secretive and excretive processes?
4. How does the agent influence the sensibility of the body generally and locally?
5. How does the agent affect the muscular activity?
6. How does the agent affect the fluids of the body, and especially the blood, in regard to physical effect?
7. How does the agent affect the nervous organisation, central and peripheral?
8. How does the agent affect the mental powers?
9. How does the agent influence the nutrition of the body, in the whole or in part, when its action is long continued?

To the consideration of some of these questions I shall invite attention in my next lecture.

(To be continued.)

New Inventions.

GELATINE LAMELS, OR PORTABLE MEDICINES FOR THE USE OF TRAVELLERS.

THESE lamels, a variety of which can be put into a small, neat, flexible leather pocket-case supplied by the inventors, Messrs. Savory and Moore, of New Bond-street, enable the practitioner to carry about with him, without inconvenience, the principal active drugs. The lamels themselves consist of thin, pliable, and in some cases transparent sheets of uniform thickness. They are portable, they secure an accurate quantity of the substance to be administered, and they are taken with great facility, either as a lozenge or in a little water. It is said they will retain their virtues under all climatic conditions. Pharmacists bring physicians under great obligations by devices that give elegance and convenience of form to medicines, of which these lamels are a striking example. They only admit of one improvement—some admixture that would remove or qualify the taste of the medicines they contain.

CAUTY'S PATENT POULTICE.

THE India-rubber, Gutta-percha, and Telegraph Works Company (Office, Cannon-street, E.C.) have produced some conveniently shaped india-rubber hot-water bags, provided on the side which is applied to the skin with a layer of spongiopiline, which can be moistened with warm water. The combination is ingenious, and will be an acceptable addition to the apparatus for the application of heat and moisture, for many purposes superseding the disagreeable and uncleanly poultice of less enterprising days.

SEWER-GAS AND CERVICAL ABSCESS.

To the Editor of THE LANCET.

SIR,—Mr. E. Owen, in his letter in your issue of the 3rd inst., has certainly struck the keynote. When is an abscess, or other kind of ill-health, the effect of sewer or other noxious gases? and when struma?

Mr. Owen, in his letter, has well shown how cervical abscesses can be caused by sewer-gas. And does this not teach us a great lesson? That we ought in every case to go carefully into all particulars, and not content ourselves by saying "struma!" Mr. Owen's cases have particular interest to me, especially when followed by a letter from Dr. Cheadle in your issue of the 17th, because some few months ago I attended a case in the same district. My patient was a little girl, aged nine. Her mother, on my arrival, said, "I am almost ashamed to have sent for you, it seems so trivial, but my child's foot has been bad two weeks, and I cannot get it well.

On examination I found a small ulcer on the instep of the right foot rather larger than a sixpenny piece; it looked an ordinary "indolent ulcer." The child's pulse was weak and soft, but in other respects she seemed pretty well. The cause of the ulcer was the falling of a box on the foot; the skin at the time was slightly abraded. In a day or two it festered, and her mother put on a poultice, followed by other home remedies.

I ordered quiet on the sofa, a nourishing diet, half a glass of port wine daily, bark and ammonia twice a day, with a stimulating lotion to the ulcer, and left feeling the child would be well in a few days. I will not go into all the various remedial measures I tried for nearly six weeks. At the end of that time she was but little better, as far as the sore was concerned. I came to the conclusion something was undermining the child's health. I saw her father and told him I was convinced his drains must be wrong. For some days he did not seem inclined to credit my assertion. On leaving the house one evening, soon after my conversation on the subject, the wind happened to be blowing towards me, and brought with it an unmistakable and powerful stench of sewer-gas. I returned to the house, called him out, and said, "Sniff the air and see if you can't find the cause of your child's ill-health." The next puff of air was conclusive to him. He sent the child away to the seaside a day or two after, and in less than a week, with a little cold-water dressing, it was well. I have much pleasure in sending these few particulars to you, not only to endorse the remarks of Dr. Cheadle and Mr. Owen, but in the hope something will be done to improve the pestilential air of this suburb.

I am, Sir, yours truly,

SYDENHAM J. KNOTT.

Burwood-place, Hyde-park, August 15th, 1878.

THE VIOLET-POWDER POISONING CASE.

To the Editor of THE LANCET.

SIR,—I notice in your last issue a communication from Dr. Tidy, of the London Hospital, giving an account of the violet-powder poisoning case. As I assisted Dr. Browne, of Stoke Newington, in making a post-mortem on the first case Dr. Tidy speaks of, I am in a position to offer one or two observations which seem to have escaped his notice. I am perfectly satisfied that *no* arsenic derived from the surface of the skin got mixed up with the viscera during the post-mortem examination, care having been taken to prevent this occurring; but might not some of the same arsenic from the skin have found its way into the acidulated water which Dr. Tidy used when the body was cut up and boiled, and so have helped to make up the large total of 6·5 grains?

In this, as in the other case, there was induration of the tissue for nearly two inches round the navel, making it difficult to cut through and to sew up again. The sloughs on the groins, &c., were about the size of a farthing and of a creamy colour and consistence.

With regard to the dusting of the powder over the body, I understand that, instead of the common powder-puff, a rabbit's foot was used, which makes it improbable that much powder could have been inhaled, independently of the fact that arsenious acid has a specific gravity of 3·6, which rather precludes the idea of its floating about in the air long enough to be inhaled. I should much like to know if Dr. Tidy is of opinion that the absorption of the arsenic from the skin begins (in any considerable amount) before irritation and inflammation commence, or if irritation and inflammation precede absorption.

To conclude, I see that Dr. Browne has given a letter of warning to the papers, he having had one or two cases of poisoning from the same powder but a few days ago.

I am, Sir, yours truly,

St. Bartholomew's Hospital, August 27, 1878. H. M. G.

MR. WALTER S. SIMPSON, surgeon, of Pontefract, has been thrown from his horse and sustained a fracture of one of his legs. The accident was caused by the animal taking fright at the whistling of an engine.

THE LANCET.

LONDON: SATURDAY, AUGUST 31, 1878.

THE thirty-second Report of the Commissioners in Lunacy shows an increase in the number of persons classed as lunatics on the 1st of June, 1878, as compared with the return made for 1st June, 1877, of 1902, and it is explained that only on four occasions during the last twenty years—namely, in 1863, when the excess over the preceding year was 1989; in 1868, when it was 1914; in 1869, when it was 2177; and in 1871, when it was 2042—has this increase been exceeded. There has been a considerable augmentation of cases in county and borough asylums, partly accounted for by the transfer of pauper patients from licensed houses to the new county asylum at Banstead, in Middlesex. Looking at all the facts detailed in the Report, and drawing a general inference from what is known of lunacy in 1877, we doubt whether the increase in cases returned to the Commissioners betokens any real advance of the malady. Year by year the definition of lunacy is growing more comprehensive, so that it includes cases which have previously been otherwise classed; and it cannot be doubted that as the "accommodation" for patients is augmented, cases are found among the pauper inmates of workhouses, the vicious or disreputable classes, and the general population, which it seems necessary to place under treatment. It must, therefore, never be forgotten that as the lunacy system is developed and the operation of our protective laws is perfected, there will be a natural increase in the number of cases brought under the cognisance of the Commissioners, which needs to be discounted before we can say that it indicates a growing proportion of cases of insanity occurring among the population in excess of the natural increment. Then, again, it has been pointed out that under the humane treatment of recent times lunatics live longer as well as happier lives, and this circumstance must in itself produce an increase in the number of patients living at successive periods. It is true that the ratio per 10,000 of lunatics, idiots, and persons of unsound mind to the population has risen steadily from 18·67 in 1859, to 27·57 in 1858. This is a startling increase, but probably one in great measure accounted for by the causes we have named. That some part of the apparent *increase* is in fact *accumulation*, will be seen from the following statement in the Report:—"A further accumulation of chronic cases appears, however, to be going on in county and borough asylums. Of the total of 37,763 patients in these establishments on the 1st of January last, only 2428, or a proportion of 6·42 per cent., are returned by the medical superintendents as curable cases. On January 1st, 1877, the numbers deemed curable were in the proportion of 7·22 per cent." The grant of four shillings a head per week made by Parliament towards the maintenance of pauper lunatics in asylums has, beyond question, the effect of increasing the number of such patients in these institutions, with a corresponding decrease of the number retained in workhouses. Moreover, there is a tendency to look upon the troublesome mental weakness and irritability of old age as "insanity," and this doubtless helps to swell the number, as it raises the average, of persons classed as lunatics and placed in asylums. We are not disposed to take a desponding view of the subject, nor are our apprehensions for the sanity of the population seriously deepened by the present Report.

There are two or three matters of public importance to which the Commissioners in Lunacy direct attention, and whereupon thought may be wisely bestowed. Referring to the demand for asylum accommodation still felt, the Board lays stress on the consideration that buildings erected for the reception of chronic cases "should be less costly than those of ordinary asylums; the proportionate quantity of land need not be so large, and the staff of attendants need not be on so high a scale numerically as in the curing institutions; yet such auxiliary asylums for chronic patients may be made efficient for their purpose, and may be worked at a lower rate of maintenance than the curative or parent asylums." In principle, certainly, this opinion is wise, and the fundamental premises on which it rests are sound; but it proceeds on the assumption that the existing establishments are effective, and worthy to be retained as "curative establishments." On that issue we have repeatedly opposed the view here expressed, or rather implied, by the Commissioners; and to the judgment already formed we must adhere. Looking to the condition of things existing, we think it would be incomparably better policy, and in a few years more economical, to build a small asylum adapted for exclusively *hospital* purposes in each district, to supply this establishment with every convenience for the treatment of acute cases, and to place it under the management of a well-skilled staff of medical officers for curative work, the care of the incurably insane, which consists mainly in their safe custody and generously sympathetic treatment, being carried out in the overgrown asylums distributed throughout the country, which now act rather as refuges and depositories for the insane than medical institutions for the relief of their malady. The admirable inspectorial work of the Commissioners, and the enterprise of improvement which it has elicited from superintendents and committees, have developed these asylums to a degree of perfection well adapted for the reception of chronic cases; and it might be possible to save money by reducing the proportion of attendants to the resident population, if acute and certain violent or puerperal cases were not received. This is the practical reform which we conceive to be needed, and we believe it is in the direction indicated true economy of public money lies.

Another matter of moment is the custody and treatment of criminal lunatics. To this subject it is most desirable that attention should be pointedly called. It is impossible to read without anxiety of a "system which has been in operation for the last four years of not sending (to Broadmoor) male convicts becoming insane whilst undergoing sentences of penal servitude, but treating them as a class in one of the convict prisons." It would, under any circumstances, we think, be a cause for regret that these persons, who, it must not be forgotten, are legally entitled to the same care of body and mind as the non-criminal class of paupers, should be unprovided with special medical assist-

ance; but what gives a peculiarly painful aspect to their position is the further fact stated by the Commissioners—namely, "*No returns are made to us as to these criminal patients, nor have we any official knowledge of their number.*" In short, "convicts becoming insane whilst undergoing sentence of penal servitude" are not placed within the protecting lines of the Lunacy Acts. The public have no guarantee for their proper treatment, and these unhappy people alone are, so far as the legal provisions of Lunacy law and the beneficent work of the Board of Commissioners are concerned, practically outlawed. The anomaly of the arrangement comes out clearly in the circumstance that, while criminals who are either "certified to be insane whilst awaiting trial," "found insane on arraignment," "acquitted on the ground of insanity," or "reprieved on the ground of insanity," *do* enjoy the privilege of special treatment, and are placed under the protection of the Commissioners, those who become insane "whilst undergoing sentence of penal servitude" are wholly deprived of aid, and buried out of sight in a convict prison! This is, beyond question, a most unsatisfactory state of matters, and it is one that calls for remedy. We are unable to agree with the Board of Commissioners in the suggestion that "in future the Broadmoor Asylum should be reserved for the reception of patients who have committed offences of a heinous or aggravated character, and whether the other criminal lunatics should not be sent to their county asylums." The presence of criminal lunatics in ordinary institutions has been one of the crying evils against which medical superintendents have everywhere complained. The reports of county and borough asylums teem with complaints of the trouble and difficulty, amounting to demoralisation and defeat of the effort to cure, which result from the existence, in large bodies of the insane, of individuals who are insensible to the appeal to virtuous instincts and are imbued with a keen sense of their legal disability for punishment. We had a strong impression that the Commissioners had themselves protested against this evil, and we are wholly at a loss to understand how they can tolerate it, and even advise its extension. Perhaps the gravest issue raised by the Report is that which crops up from the statement that there are at Broadmoor four hundred persons "detained during Her Majesty's pleasure," and "among them are six men and eight women who, in the opinion of the medical superintendent, are now sane"! What is to be done with these individuals? That their disposal is of urgent importance to the community may be deduced from the remark that "all but one of these patients lastly referred to committed murder." Conditional discharge to friends—the condition being a guarantee binding the person undertaking the custody of the ex-criminal-lunatic to exercise continued watchfulness—a form of personal security which could not, obviously, be obtained by any fund raised by public subscription!—is sometimes resorted to; but this cannot without serious risk be adopted in the case of murderers, whose homicidal propensities may at any time be revived. Meanwhile it is a reflection fraught with the deepest concern that persons who have been placed in confinement "during Her Majesty's pleasure," as the phrase goes, solely for the protection of the community, with no thought of punishment for offences of which they are held to be legally innocent, should be kept in confinement after the need for protection has, in the opinion of competent judges, wholly ceased. It may not be easy to devise a system which shall put an end to all the anomalies and social difficulties of the cases; but it would obviously be possible to remove these persons named from their present position and surroundings, and, at least, restore hope to their blighted lives by giving them some suitable occupation in establishments where they may remain under observation without being still condemned to the life of criminals who are enduring a sentence of perpetual banishment without being condemned for crimes of which, though they are undoubtedly the perpetrators, the law holds them guiltless. The whole subject of criminal responsibility and the distribution of lunatics needs to be reconsidered; but, pending the performance of that onerous duty, something might be done to ameliorate the condition of this not very large, but most distressing, class of the insane.

The thirty-second Report of the Commissioners in Lunacy may hereafter be found to afford matter for medical criticism, but these socio-economic and prudential topics at once arrest attention, and call for remark.

ALTHOUGH it has long been manifest that Dr. BROWN-SÉQUARD'S ultimate working goal was Paris, and notwithstanding that his recent election to the Professorship of Medicine in the College of France, as successor to CLAUDE BERNARD, has placed him in the position he would most desire, and where his transcendent abilities can be exercised after a fashion most profitable to medicine at large and most agreeable to his own feelings, we should be more than mortal if we could regard his gravitation to the French schools, and now this clinching of his connexion with them, without regretful envy. It has been our misfortune (and our Transatlantic brethren will no doubt say it has been equally their misfortune) that we had nothing to tempt him to stay with us here except wealth, and, as it happened, wealth was not a temptation to him. It would appear to have been impossible to find for him in this country, in the present state of our organisation as to medical education, such a position in one of our universities, colleges, or great medical schools, as would have enabled him to prosecute his studies and teachings among us, when once we had hold of him. Whether this result arose from any faults of ours—faults of our unsympathetic insular reserve or of certain Kilkenny-cat-like habitudes characteristic of our colleges, schools, and hospitals—or whether it arose from the personal proclivities of Dr. BROWN-SÉQUARD himself, we do not pretend to say. Born in a British colony (Mauritius), afterwards naturalised as an American citizen, he is by maternity half, and by predilection, education, and language, wholly a Frenchman.

Few who had the opportunity of knowing the facts will forget the impression made upon the profession in this country when in 1857 Dr. BROWN-SÉQUARD first appeared publicly among us, and delivered two courses of lectures, one at the Royal College of Surgeons, on the Physiology and Pathology of the Nervous System, the other at St. Bartholomew's Hospital. At this time the knowledge of his physiological and pathological researches had here been mainly confined to the initiated in such matters. This arose in great measure from the

circumstance that they had, as a rule, been published in various serials, French, American, and English, only to be found on the shelves and tables of the great libraries, and not readily accessible to the bulk of professional leaders. Sufficient, however, was known of these researches to excite the greatest interest in his appearance as a lecturer in the metropolis, and those who were not personally able to listen to the lecturer himself had presently the opportunity of studying his teachings at large in the pages of THE LANCET. Dr. BROWN-SÉQUARD then spoke English so hesitatingly, and the use of the language was so unfamiliar to him, that at the first aspect it appeared as if he must stand at great disadvantage before an English audience. Such, however, proved not to be the case. The vigour of his address and the precision of his descriptions, as we had occasion to say at the time, quickly caused the listener to lose sight of any defects which might arise from the want of a complete mastery of the English tongue. Indeed, the mind of the lecturer seemed to be almost the more attractively and clearly set forth from the very shortcomings of the guise in which it was shown. The steady, unfaltering observation; the careful precautions against error, either from the mind or from the senses; the checks ever interposed during research, not as stumbling-blocks, but as marks from which to try back (so to speak) and to re-examine and confirm the truthfulness of the course already run; the unwearied perseverance, and yet the quiet, soul-warming earnestness which became apparent during the course of the lectures, formed a rare and most instructive study and lesson, and charmed to enthusiasm the hearers.

When Dr. BROWN-SÉQUARD took up his abode in London, became physician to the then newly established National Hospital for the Paralysed and Epileptic, and entered into the practice of his profession, we had hoped that he would become a permanent settler with us. In this hope we were disappointed. It was our misfortune, as we have already said, that we could not retain him. But if we regret our loss, and envy withal our neighbours across the Channel their gain, we not the less rejoice to see Dr. BROWN-SÉQUARD now placed in a position worthy his fame, in which he will be able to prosecute his labours under conditions the most favourable for their utilisation by the world of medicine at large, to which he will give increased lustre.

It would be hopeless to endeavour to crowd within the limits of an editorial article a summary of the physiological and pathological work done by Dr. BROWN-SÉQUARD from the date of his thesis for the M.D. of Paris in 1846 to his latest published researches, which appeared in THE LANCET of the present year. A bare synoptical list of his various published works forms a respectable volume.[1] This list, although prepared especially for the candidature of the Chair of Medicine in the College of France, has a permanent value, as it supplies a much-needed desideratum — namely, a complete account of Dr. BROWN-SÉQUARD'S writings, and the various publications in which they have appeared, within the period to which the list refers. It is not without gratification that we observe how large a proportion of Dr. BROWN-SÉQUARD'S researches and teachings have been given to the world through the pages of THE LANCET.

[1] Notice sur les Travaux Scientifiques de M. C. E. Brown-Séquard. (Paris: G. Masson. 1878.)

AN important contribution to the subject of the pathology of the common disease, Psoriasis, appears in the July number of the *New York Medical Journal*, from the pen of Dr. A. R. ROBINSON. It is illustrated by a number of woodcuts, and deserves careful attention. The author has studied the changes which take place in portions of the skin in the earliest and also the later stages of the disease, and comes to the conclusion that psoriasis must be regarded, not as a disease of general origin, nor as an inflammatory affection of the papillary or even deeper corium, or both, attended *secondarily* by changes in the rete Malpighii, but as *primarily* an hyperplasia of the latter structure. Dr. ROBINSON grounds his opinion directly upon a microscopic survey of the comparative order in the changes that occur in the different tissues at the seat of disease. The author would seem by his remarks to imply that the view he takes as to the essentially local nature of psoriasis is a novel and original one on his part. This, however, is not quite correct, and we are bound to add that it has been held and taught for some time by English dermatologists, and stated in clear terms in their works, particularly by Dr. TILBURY FOX. It is perfectly true that more exact microscopical data in proof of such a proposition were needed, and these Dr. ROBINSON now supplies. Nevertheless, the anatomical facts afforded by the observations of NEUMANN and others, when correctly interpreted, together with clinical observation, have been regarded as indicative of the local nature and origin of psoriasis. The valuable data, however, now advanced by Dr. ROBINSON in support of the same conclusion may be briefly summed up as follows. In the early stage of the disease the morbid changes consist in a distinct growth downwards into the cutis, with augmentation in the amount of its cell elements, of the interpapillary portion of the rete, and a corresponding and consequent increase of the papillary spaces, which, however, do not enlarge upwards, or, in other words, whose enlargement is not due to an increase of the papillæ themselves, but of that of the rete on either side downwards, as stated. The rete cells do not differ much from their normal appearance, except that they are perhaps smaller when first formed, are not so regularly disposed as usual, and have their nuclei large and sometimes doubled, the latter feature being indicative of a true cell division. In the papillæ and superficial parts of the corium within the region of disease in the papular stage there are enlarged blood-vessels, and round bodies in varying numbers in the surrounding tissue, with serous infiltration; whilst in the non-papular region — i.e., the healthy adjoining skin — these conditions are absent. The deeper parts of the cutis and the glands are normal. NEUMANN declared that the papillæ were actually enlarged. This Dr. ROBINSON affirms is only apparent. In other respects, in the main, these two observers agree as to actual appearances, though interpreting them differently. The hyperplasic-cell state, according to Dr. ROBINSON, precedes in point of time the actual formation of the psoriasis papule on the surface, and, indeed, probably the dilatation of the vessels and the white cell migration into the tissue outside them, to which two latter occurrences the

elevation of the diseased area is due. In addition, the external root sheath of the hair-sac lining becomes hyperplasic. In the chronic form of the disease the changes are the same, only greater in degree, save that cell-infiltration composed of wandered white blood-cells is found more deeply in the corium tissue, but limited to certain spots about the vessels. The careful researches of Dr. ROBINSON, which we can in the main fully confirm from independent observation, challenge the criticism of other workers. The pathological history of so common a disease as psoriasis ought by this time to have been more fully studied, and thereby more definitely ascertained.

We think it very important to add that, from a therapeutical point of view, in turning to account such data as those above described, the modifying operation of diathetic conditions upon what may be regarded in the abstract as a local disease must never be overlooked. Psoriasis is influenced greatly by such diatheses as the gouty, the scrofulous, and the syphilitic, and these have to be taken into serious account in treating psoriasis. How these act upon and modify the minute changes in the skin may be doubtful, but that they do so is probable; and the field of inquiry in this direction is interesting, and would well repay investigation.

Annotations.

"Ne quid nimis."

CYPRUS: ITS "FEVER" AND SANITARY FUTURE.

A MEDICAL correspondent writes to us from Larnaka:—"While waiting my turn of the 'fever' of this precious spot, I have been occupying myself in studying its features, and it occurs to me that you might be glad to have the general result of my observations. First, there is a certain consolation in knowing that the disease may be looked upon rather as a matter of discomfort than of danger; for the mortality from it among the troops here has hitherto been exceedingly small, and would seem to have depended, in the few cases in which death has happened, upon some anterior unhealthy condition of the individual rather than upon the direct effects of the 'fever.' But, be this as it may, the usual course, so far as I can make out, is as follows: About the tenth or twelfth day after reaching the island, in those who are attacked, either a profuse, painless diarrhœa comes on, or there is marked constipation. Next, and very suddenly, the patient is seized with faintness or vertigo, or excruciating headache—any one of these three symptoms—generally followed by bilious vomiting. Then a slight chilliness is felt, followed quickly by high fever, accompanied by delirium, great restlessness, suffused eyes, dusky face, occasionally bleeding from the nose, and a peculiar pain between the scapulæ or in the chest, loins, or limbs. Local medicos say that albuminuria occurs during the fever, but I have not yet been able to ascertain this myself. The temperature during the febrile paroxysms usually rises to 104·5°, but a temperature as high as 108° has been recorded. This febrile attack lasts thirty hours, when profuse perspiration takes place, with more or less relief of the whole symptoms, the pain in the head being least relieved. The next day there is an exacerbation during the greatest heat, and the day following (the third) the attack comes to an end, leaving the patient weak and sulky. Obviously the fever is a remittent, and I learn that it is common to the whole island, and that every detachment of the troops here, as also of the marines and sailors, has suffered from it to a greater or less extent. It seems probable that no new comer will escape. Quinine is the one medicament needed. Of course, the conditions for malaria exist throughout this utterly neglected island, and the present conditions of temperature favour its development. We are under canvas during the day, in a blazing sun, by which we should be positively grilled were it not that a strong south-westerly wind is almost continually blowing, and at night we are chilled to the marrow by a cold damp air. There is no shelter from trees hereabout, and if we seek shelter in the town, or, indeed, in any walled place, we simply jump from the frying-pan into the fire; for the filth of the towns and walled places is unutterable, and, I imagine, more to be dreaded than the malaria of the open.

"You will surmise from the foregoing that I am of opinion that we have no help but to accept the present local sanitary conditions of things as they affect the troops at Cyprus. Our men are encamped in the most promising spots, with the results described. I came out with the expectation that there had been some oversight in this respect, the medical aspect of the occupation having possibly been overlooked; but this was an error. The conditions on which the present sickness of the force depends are conditions general throughout the island, I believe—at least, the lowlands,—and some little time will be required before they can be eradicated. But, after all, it may be questioned whether the 'fever' is the worst evil in the island at the present moment. We are given up (unhappily, without prospect of immediate help) to every device of Levantine rascality, and it will be a mercy if we are not all ruined utterly by the outrageous extortions to which we are subjected. We are paying prices for food and service which ought to furnish us with the choicest Greenwich and Richmond feeding daily, but from which the best we can hope is to save some remnant of unruined digestion by the time our Commissioner gets things in hand. Meanwhile, we have the miserable consolation that we are sacrificing ourselves, first of all, to make the island tolerable to the English tourist, and next in view of the Eastern (question) millennium inaugurated at Berlin."

MEDICAL CERTIFICATES AND INQUEST CASES.

THE Registrar-General, in his last Weekly Return, calls attention to the following case:—It appears that on the 11th instant a navvy died in Islington, aged thirty-six years, and that a registered medical practitioner certified the cause of death to be "phthisis eight months, cerebral effusion." The death was registered, and the above cause of death was entered in the death-register; but an inquest was subsequently held, and after a post-mortem examination the verdict returned was "injury to brain and fracture of skull by falling from a waggon." Without knowing the circumstances of the case it is difficult to comprehend how the medical practitioner was so deceived as to the true cause of death, and how the fracture of the skull escaped his attention. It is evident, however, that the facts warrant the Registrar-General's remark that they prove "the necessity for greater care and caution in certifying causes of death." There is too much reason to believe that the responsibility involved in the judicial act of certifying a cause of death is frequently overlooked, and the Act regarded as a mere matter of form. Especial care is required in those cases in which it is sought by relatives to evade the holding of an inquest by the production of a medical certificate. It should be remembered that the medical certificate is an official document, the contents of which are entered, together with the name of the certifying medical practitioner, in the death-register. It is, moreover, important that, in accordance with the instructions of the Registrar-General, all cases of deaths by violence should be brought under the notice of the coroner but if a death from fracture of skull be certified as "effu

BEST COPY AVAILABLE

of the brain," the registrar cannot easily recognise the death as resulting from violence, and there is great risk that the case will not come under the notice of the coroner. It is undesirable that, in cases of death from violence, medical practitioners should give certificates of the cause of death until they are informed that the coroner has decided not to hold an inquest. In the case above referred to, one of the results of the incorrect certificate was that the death of the navvy was classified in the Registrar-General's return for the week ending 17th inst. under "phthisis," instead of "fractures and contusions."

SEA-WATER BATHS FOR LONDON.

THIS addition to our luxurious appliances for health-preservation is again under discussion as a practicable scheme. It should certainly be possible to obtain a supply of sea-water by the usual apparatus of pipes, although there would doubtless be great difficulties to overcome, arising out of the levels and other physical and hydrostatic features of the undertaking. Engineering skill may be trusted to surmount all obstacles, provided only that the enterprise can be made a remunerative investment. The first cost must necessarily be very large, but we apprehend that no insuperable difficulty is likely to be encountered in getting the capital if a sufficient revenue by way of interest can be secured. It must not be forgotten that sea-water passing through a long series of pipes will certainly deposit a considerable quantity of salt, and the perpetual expense of cleansing and renewal will be great. In short, the enterprise would of necessity be one of gigantic proportions. Is it reasonable to hope that the amount likely to be contributed by the public as purchasers of tickets for sea-baths would prove adequate to furnish the average rate of interest on the capital and progressively pay off the first cost? This is how the matter must be regarded—purely as a question of finance. The benefits likely to be derived from the use of sea-water must, of course, be in large measure determined by the state in which it can be supplied. If the freshness of the sea-water can be retained by a rapid flow, the value of baths so furnished will be great from a hygienic point of view. If it is stale as well as stagnant water in which we are asked to bathe, the advantage will not be great and the revenue derived will not be large. Before any scheme is projected, its full results as an attempt to bring sea-water to London, taking it out of its surroundings, must be discounted. Unless the undertaking is a sanitary success, it must needs be a monetary failure.

SCURVY AND LIME-JUICE.

MORE than ten years have now elapsed since the Merchant Shipping Act of 1867 (commonly called the Duke of Richmond's Act) became law. This Act provided, among other things, for the supply to merchant ships of lime-juice and lemon-juice of good quality, and specified also that the quantity given out to each sailor should be not less than one ounce daily. During at least six or seven years subsequent to the passing of the Act, it was shown by reliable statistics, and was generally acknowledged, that scurvy had decreased to a considerable extent in the British mercantile marine, and, with at all events some of these results, the Act may be fairly credited. But during the last two years outbreaks of scurvy afloat have again become painfully frequent. We have recently been apprised of two official inquiries held at the instance of the Board of Trade concerning ships that have arrived in the Clyde with cases of scurvy on board. In the one ship four deaths had occurred, and it was suggested that the proper quantity of lime-juice had not been regularly served out to the crew. In the case of the other, evidence was adduced that went to prove that the lime-juice was worthless as an antiscorbutic. Not very long ago a Blue-book was published giving particulars as to cases of scurvy that had become the subjects of official inquiry, and in the majority of instances the quality of the lime-juice was suspected, or the quantity given out was shown to have been insufficient. We have remarked many times that more publicity should be given to these Board of Trade inquiries. The public can attend if they choose, but in the interest of the general community it is advisable that the Government should in such matters show their sense of responsibility by publishing the results. That there is and always has been a disinclination to do this is evident; but whether shipowners, ship-masters, or others interested have to be consulted or not, the system is unsound, and bad from an administrative point of view. We fully believe that scurvy is an eminently preventable disease, and this point the Admiralty (after much pressure from without) assisted to establish some eighteen months ago, shortly after the return of the Arctic Expedition. If, therefore, the working plans adopted by the Board of Trade be in any way defective, let the defects be pointed out and remedied without delay. Certainly the result of each case should be published officially.

YELLOW FEVER.

THE epidemic of yellow fever in the Southern States still continues, and the mortality in New Orleans and Grenada, Mississippi, is increasing. Several other towns have quarantined Memphis, and the officials have telegraphed from there to Washington for assistance, in order that the poor may be provided with sufficient food to enable them to leave the place. On the 16th inst. an American schooner, bound for New York, put into Delaware Breakwater with all her crew dying or ill from the fever. It is remarked, as regards the type of disease at New Orleans, that fully 60 per cent. of the fatal cases have occurred among foreigners, or people not acclimatised, and 75 per cent. of the remainder are children. On the 15th inst. 98 cases were reported in that city, and 16 deaths.

A large and influential meeting was held on Wednesday at Liverpool "to consider the needs of the fever-stricken people in the Gulf States of North America," and to raise a subscription to provide them with medical aid, nursing, and other necessaries. As we go to press, intelligence reaches us that on the 27th inst. 49 deaths occurred in New Orleans, 33 at Memphis, and 24 at Vicksburg. It is under such circumstances re-assuring to know, that although the temperature in England is high, the thermometer is not sustained at a point sufficient to nourish yellow fever, even if a stray case were imported into the country. But port sanitary authorities, particularly in London, at Plymouth, Southampton, Swansea, Cardiff, Bristol, and Cork, should use all diligence in preventing the landing of any deceased person's effects who has died of the disease. A special notice in this direction has been posted for some time in the docks and about the Thames steamboat piers.

THE EXECUTION OF HÖDEL.

THE detailed accounts of the execution of Hödel, for attempted assassination of the Emperor of Germany, give certain particulars of physiological interest. The criminal was decapitated, not by the guillotine, but by the axe, after the older fashion in which decapitation used to be performed. To the end Hödel maintained a defiant attitude, contemptuously spitting on the ground and crying "Bravo!" when the sentence was read to him as he stood before the scaffold; sneering disdainfully when the sound of the prison-bell ringing the death-toll first struck upon his ears, turning his face to the direction of the sound; and springing lightly up the three steps of the scaffold when called by the executioner. These evidences of the degree to which he

BEST COPY AVAI

had strung up his nerves for the event, and of the mental tension he underwent at the moment of death, are not without interest in relation to what follows. The head was struck off at a single blow, and as it fell slight convulsive movements of the face were observed, while the body was convulsively agitated, the motions continuing for some little time.

The last request made by Hödel the evening before his execution had been for a good dinner, a bottle of wine, and cigars. These were granted to him, and he ate the meal heartily. The executioner, it is noted, performed his office in "ceremonial dress"—to wit, the ordinary evening dress of civilised society, the dress coat and white neck-tie complete!

HEALTH ITEMS FROM THE RUSSIAN ARMY OF THE SOUTH.

THE latest news from the Russian Army of the South (22nd August) brings the information that 32,000 sick had to that time been transferred by sea to South Russia. The provision for their reception there is stated as follows:—Military hospitals: Odessa, 9500 beds; Nikolaiev, 3600 beds; Sebastopol, 3400 beds; Theodosia, 2450 beds. Red-Cross hospitals: Odessa, 2000 beds; Sebastopol, 275. Total beds, 21,225. Of the patients received into these hospitals, 12,000 have already been transferred into the interior, and the rate of removal is such as to keep a sufficiency of beds free for new arrivals without dread of overcrowding or of its becoming necessary to interrupt the removal of sick by sea from the army in the field.

At Bourgas it would appear that malignant fever (?typhus) is still seriously prevalent among the troops.

In view of the certainty of peace, and of the approaching withdrawal of the troops now occupying Roumelia, the Russian Red-Cross Society has issued a circular of instructions to its representatives and agents relative to the reduction of their operations to a peace-footing. It has directed them not to enter into any more contracts for the formation of ambulances; to close at once all ambulances at a distance from lines of railway; to close also ambulances which are empty or which contain so small a number of patients that they can be received into the civil or military hospitals, or, where the patients cannot thus be transferred, to bring the patients of two or three ambulances together in one ambulance, diminishing the staff as necessary; to transfer unexpired contracts and unused stores to the military authorities; and, finally, to give such help as may be desirable in assisting those authorities and collecting extra stores for them, establishing depôts for the purpose, if necessary.

THE DIFFUSION OF SALICYLATE OF SODA.

THE rapid diffusion through the system of salicylate of soda, which its action and rapid excretion suggest, has been confirmed experimentally by MM. Ch. Livon and J. Bernard. In their investigations they have confirmed the conclusions of previous observers regarding the action of salicylate on the conscious sensibility; the production of tetanic contractions and convulsive movements, and disturbances of respiration and of the cardiac pulsations, due to the alteration of the reflex action of the medulla and cord. Their observations were, however, especially directed to the diffusion of salicylate in the economy, and the means by which it is eliminated. For the detection of the salicylate they have employed the perchloride of iron, which remains the most delicate reagent known. In the first experiment six grammes of salicylate of soda were injected into the stomach of a dog. The œsophagus was tied; two hours afterwards the salicylate was found in the saliva. In the second experiment ten grammes were injected into the stomach, and an hour afterwards the salicylate was found in the bile. In the third experiment three grammes of salicylate were injected into the femoral vein, and an hour later it was found in the bile. In a fourth experiment seven grammes were injected into the stomach, and four hours later the salicylate was found in the pancreatic juice. In a fifth, two centigrammes were injected under the skin of a guinea-pig, and one hour afterwards the salicylate was found in the milk. The method of detecting the substance was to heat the liquid with hydrochloric acid, and then shake it up with ether. Evaporation of the ether leaves a residue which gives, with perchloride of iron, the characteristic violet tint. The saliva, the bile, and the pancreatic juice were collected by means of fistulæ. The fæces and urine also showed evidences of the salicylate. In all the experiments upon dogs it was found also that the cerebro-spinal fluid contained salicylate, even several hours after the administration of the drug. It is suggested that probably it is the presence of the drug in the fluid which bathes the central organs of the nervous system which accounts for its action upon them. By the injection of from two to ten centigrammes of salicylate through the occipito-atloidean ligament into the spinal canal, all the phenomena of salicylic poisoning were rapidly obtained. The precaution was taken first to withdraw an equal bulk of the cerebro-spinal liquid, so as to prevent any compression of the cord. For the sake of controlling the experiment, simple water was, in another experiment, injected in the same manner, with the effect, however, of causing only prostration, and not the tetanising effects of the salicylate.

FLOATING NUISANCES.

AN anonymous correspondent in *The Times* calls attention to a real and material nuisance that at this season of the year is specially objectionable, as affecting the comfort, if not the health, of that insignificant section of the community who are compelled to remain in London during the months of August and September. Dead dogs are reported—and truly reported—to infest the surface of the Thames between Chelsea and Woolwich continuously and persistently, to the great annoyance of the steamboat passengers, as well as of the migratory floating population. It occurs to us that the provisions of the Rivers Pollution Act ought to be capable of meeting this very unsavoury condition of things, and that the subject is one properly appertaining to the work of the port sanitary authority. The Metropolitan Board of Works have done much to beautify our capital by embanking the river, and scattering charming gardens along its borders; and, as the Corporation of London have taken upon themselves all sanitary responsibilities in connexion with the port, it is but right that the public should expect them to keep the stream clear of nuisances objectionable to at least two of the special senses. We think, in the absence of any casualty work, it cannot be very difficult for them to do so, although it may, perhaps, be argued that this is more a police than a sanitary question. Anyhow, the united action of the two authorities ought to free the Thames of what is a veritable and a very disgusting nuisance.

POTABLE WATER v. PISCICULTURE.

THE Severn Conservancy Board is likely to be at issue with the Liverpool Corporation, because the latter proposes to ask for powers to take water from the Severn for drinking and domestic purposes at the rate of fifty-two millions of gallons daily. The Conservators consider that the salmon spawning-grounds would be injuriously affected if the river Verniew, one of the sources of the Severn, were "tapped" for this purpose. Having regard to the fact that the Contagious Diseases (Animals) Act will, if put into force, raise the price of meat considerably, there can be no do-

PY AVAILABLE

as to the great importance of developing pisciculture as much as possible throughout the kingdom. We allow tons of water, falling from the clouds, to run away to the sea, and we destroy, or suffer to be destroyed, tons of fish spawn (produced in salt as well as fresh water) that would, and we hope will, without any trouble on our part, supply our markets with an abundance of cheap and good food, becoming, in consequence of gross carelessness and mismanagement, comparatively scarce, and so, of course, increasing in price year by year. We shall certainly support the Severn Conservators in their crusade against Liverpool, as heartily as Thirlmere was supported in these columns when destruction was threatened to its beautiful lake by the water-drinkers of Manchester.

THE SANITARY CONDITION OF RAILWAY STATIONS.

WE have received an appeal asking our help to make public a grievance of tourists and of visitors to some of our popular health resorts. The grievance relates to the neglected and filthy condition in which the conveniences attached to railway stations are too commonly kept. Our correspondent justly complains of the cruelty inflicted upon travellers by railway companies who are indifferent in this matter, and of the harmfulness of the conditions described—such, for example, as waterclosets without water, abominably fouled, and smelling most offensively. The conditions described show inexcusable neglect of the most ordinary cleanliness. As a rule, persons desiring to retire at railway stations are only too willing to pay their penny for decent accommodation, and if motives of decency will not alone move a railway board, it ought not to be difficult for them to make arrangements for which the public would gladly pay the cost. But there is a further question: What becomes of the sanitary authority in these cases? Are railway stations exempt from the supervision of inspectors of nuisances? We fancy not; and sanitary authorities could not do a more gratifying thing in the public interest than instruct their officers to look to this matter and proceed against railway companies who keep their public conveniences in such a way as to be a nuisance.

CATS AND THEIR KEEPERS.

THE following advertisement has recently and frequently appeared in some of the daily journals:—

"STARVING CATS.—To Families leaving London.—Please remember your cat. One halfpenny a day (or humane destruction) will prevent the addition by one to 'the thousands of stray cats in London.'—Vide the 'Animal World.'"

The words ("or humane destruction") were, we observed, added to the advertisement after several insertions had appeared, and they constitute, in our opinion, the essence of the notice. "Humane destruction," that, costing probably a single halfpenny, would, on the part of the animal world, prevent much suffering, and on the part of that insignificant, though somewhat considerable, section of humanity compelled to exist in London during August and September, much discomfort. For the wretched creatures referred to are in numberless instances, as the advertisement indicates, left to starve by their thoughtless owners, and in some cases imprisonment is superadded. It is bad enough to be starved, but to be locked up during the process is adding insult to injury, even though practised by an anti-vivisectionist. And so, in most of the upper and middle-class districts of London, the cries of suffering cats, at this season of the year, go on morning, noon, and night. The noises are during the day somewhat diluted by the ordinary street traffic, but all through the night in the districts of Kensington, Bayswater, Notting-hill, and South Belgravia, the piteous howls and screeches are often appalling. Some proceed from imprisoned animals, and some from those at large, who, wild and despairing from hunger, turn against each other. This is not an exaggerated statement, and we put it calmly, but plainly, to Mr. Stansfeld and the other distinguished anti-vivisectionists, whether it is better to kill by carelessness, or, as the advertiser puts it, by "humane destruction" (whatever that may be). A writer in *The Times* of Monday last, under the *nom de plume* of "True Humanity," makes some pertinent suggestions on the subject well worthy the attention of the Secretary to the Society for the Prevention of Cruelty to Animals.

THE CONTAGIOUS DISEASES (ANIMALS) ACT.

THE provisions of this Act are, as we anticipated, exciting much curiosity among farmers, breeders, butchers, and others immediately interested; for, as was indicated in THE LANCET last week, the Act, to constitute a success, must be as stringently applied as a system of quarantine against cholera. We know, in respect of cholera, that our insular position and enormous commercial relations render quarantine operations, as applied to the United Kingdom, impracticable, and hence, on this as well as on other grounds, so-called quarantine against cholera has been discontinued, and an intelligent system of sanitary supervision has been adopted. We believe that the animals' quarantine regulations will not succeed, because, for reasons analogous to those which occur in the presence of cholera, they cannot be carried out in strict integrity; and so, as these are really the only novel features in the Act, we may safely assume that things will remain much as they were before it became law. The Act of 1869 provided for the treatment of two varieties of cattle disease when found in this country, and owners of stock have always been found willing to incur any personal loss in order to stamp out, by slaughter, the malady from their own farms and pasture-grounds. No less than fifteen cows were killed some few days ago in Worcestershire, because pleuro-pneumonia had attacked one of them, and there was, of course, reason to suspect that the others were infected.

HARD WATER.

The Times, some few days ago, called attention to this subject in connexion with the Liverpool water-supply. It appears that the borough derives its water partly from wells sunk in the red sandstone, and partly from collecting reservoirs, the former yielding hard, and the latter, of course, soft water. As the inhabitants prefer the latter, the authorities mix the water before distribution; but the north end of the town has lately been supplied almost exclusively from the wells, and the inhabitants are now endeavouring to force the authorities to spend about £11,000 to provide apparatus for securing a fair share of the half-and-half mixture to all the ratepayers. It is argued that the constant use of hard water results in a distinct commercial loss to the users, chiefly as regards laundry work. One of the supporters of the scheme now before the Liverpool Town Council estimated that the loss of tea in the district from the use of hard water is one-seventh of an ounce per head per day, and this small quantity amounted to an annual loss of more than £80,000 sustained by those supplied with the Bootle well water. The expenditure was authorised after much discussion, and we quote it as an example of the success that will attend any measure (sanitary or otherwise) by the adoption of which it is shown that a distinct financial saving may be effected. The British public still fail to see that prevention of disease means diminution of rates. But give the point under discussion a distinctly commercial basis, with figures for its foundation, and you find supporters on all sides. The means to an end is here, *à propos* of sanitary measures, quite justifiable, but is not applied often enough.

THE TROOPS IN CYPRUS.

INTELLIGENCE has been received at the Army Medical Board up to the 27th instant respecting the health of the troops, and is of a more satisfactory nature than the previous reports. The proportion sick in a force of 1666 men in camp and at Larnaca amounted to 6 per cent., which, under the circumstances, is not out of the way. The 42nd Regiment is not included in this, as the returns from it had not been received, but it is stated to have very few sick. The corps having the largest proportion non-effective from sickness was the Royal Engineers. This might have been expected, as the men are, from the nature of their duties—especially under the peculiar circumstances of the Force—more exposed to solar influence, which seems to be the exciting cause of the febrile affections, than any of the other troops. The death-rate has been high, but the Force is too small, and the time of its residence in Cyprus has been too short, to justify any deduction on this head. Three deaths are stated to have been caused by sunstroke, and three by fever.

We trust that this improvement in the health of the Force may be taken as evidence of the care on the part of the military authorities on the spot to ameliorate the sanitary condition of the troops, and of an amendment in the important matter of commissariat supplies, which, in the first instance, we understand, were far from being satisfactory. We trust also that the improvement indicated by the returns will be progressive, and that the health of Cyprus will shortly at least equal that of Malta so far as the British troops are concerned.

SUBPLEURAL ECCHYMOSES.

SOME observations on death by drowning, on which we commented lately, corroborate Tardieu's estimate of the significance of subpleural ecchymoses. The question of their value has also been discussed, in a more general manner, and with less confirmatory results, at the International Medico-legal Congress at Paris. Its consideration was suggested by many doubts which have been expressed, in France and elsewhere, by MM. Brouardel, Pinard, and others, regarding the accuracy of the formula enunciated by Tardieu that "the mere presence of these lesions, in whatever degree or number, is positive proof that suffocation was the cause of death." In order to obtain evidence on the question a committee of the Société de Médecine Légale was formed, of which M. Legroux was the reporter, and many experiments were performed which led to these conclusions:—(1) that in medical jurisprudence subpleural ecchymoses alone have no value, since too many spontaneous conditions, old or recent, independent of the cause of death, may give rise to them. (2) Subpleural ecchymoses are met with in violent asphyxia by hanging, strangulation, submersion, and asphyxia by compression of the thorax, and by suffocation, but in somewhat different degrees. (3) These ecchymoses of different degrees only acquire special significance when they are associated with a large number of other signs, all of which concur to indicate a certain mode of death. In a discussion which followed, M. Laborde agreed with the conclusions of M. Legroux, and called attention to the effects of poisoning by aconitine, in which also subpleural ecchymoses are produced. M. Gubler pointed out the necessity of ascertaining the mechanism of the production of these ecchymoses. It would be found in certain conditions different in appearance, but really identical, in which the mechanism is the same as that which we ascribe to suffocation—even when a poison has caused the asphyxia but has not caused sudden death, it may have permitted a resistance, a struggle against death. In some cases, however, the production of ecchymoses may be due to cardiac action. An arrest of the circulation in the lungs may cause pulmonary apoplexy. This was one mechanism by which subpleural ecchymoses might be produced. Another was the obstruction to the return of blood, another depended on rupture of tissue, another on the absence of coagulation in the blood. The conclusions of M. Legroux were also corroborated by M. Vleminckx and M. Laforest.

THE SANITARY STATE OF THE HALIFAX UNION.

THE medical officer of health's report on the sanitary condition of this combined sanitary district for the year 1877, which is, on the whole, of a favourable character, directs attention to two particular points—namely, the overcrowding in houses, and the accumulation of night-soil in one of the sub-districts. With respect to overcrowding, Dr. Britton comments upon its serious prevalence in his district, and, as we gather from him, on account of the limited capacity of much of the cottage property. It would appear as if many of the houses in his district consist simply of a living-room and a sleeping-room—that is, two rooms only,—and that the living-room is also frequently used as a sleeping-room. Houses of this class, we infer, are built back-to-back, and have, consequently no means of through ventilation. Dr. Britton observes of this evil: "When we consider the large earnings of the artisan class in this neighbourhood, and the amount of money they can and do spend upon luxuries, it seems a pity that they should remain satisfied with such a deprivation of comfort and a mode of living which materially reduces the years of their lives." As to the accumulation of night-soil, Dr. Britton touches upon an evil which we surmise is tolerably common in his district. It is the old story: the householder has the utmost difficulty to get the soil removed, and he must pay very heavily for its removal; the local authority—"sanitary authority" in this case is a misnomer—will not recognise that efficient removal of the night-soil cannot be obtained except by its own action. It is obvious that it would be cheaper to effect the removal as a community, not as individuals, through its representatives, the local authority, to say nothing of the sanitary gain. But neither community nor local authority seem to be capable of viewing the matter in this common sense light. Indeed, the question of the removal of night-soil should not be left to the option of local authorities.

FACTORY SURGEONS.

AT the annual meeting of the Associated Chamber of Commerce, held at Sheffield on Wednesday, attention was called to the mode in which factory surgeons are paid under the regulations of the new Act, and a resolution was moved and adopted that payment should be made by salary instead of by fees, and that the cost of their inspections should be an imperial matter. There appears to be a general idea among manufacturers that they are being over-inspected, and that the payment of the fees of surgeons is like the imposition of a special tax.

MORNING PERFORMANCES.

JUST at this time of the year it is the mode with persons from the provinces (numbering in the aggregate some thousands) to come up to London and visit various places of amusement. Morning and afternoon performances are now much in vogue, particularly at the Crystal Palace. As everyone knows, the theatre and concert-room are here buildings within a building, but the difficulties in connexion with ventilation are on that account by no means insuperable. During the summer and autumn, some of the roofing might be removed or rearranged without detriment to the acoustic properties of the rooms, adding at the same time much to the comfort of the audience. These morning

and afternoon performances are so very admirably arranged and so particularly recommendable on hygienic grounds, as compared with evening performances, that a remedy should be devised for the defect in ventilation, perhaps by providing a stronger "up-east" current, so that the foul and heated air might be carried off at a greater rate.

CHOLERA.

FOR several days back rumours have been afloat of an outbreak of cholera in Morocco. It is now reported, from French sources, that the disease has spread along the whole coast of the kingdom, is present at Tetuan, and has extended to the Spanish settlement of Ceuta, on the African coast. A ten days' quarantine has been declared in Algerian ports, it is also stated, against arrivals by sea from Morocco.

Our readers will recall to mind that there had been a considerable extension of cholera along the eastern coasts of the Red Sea earlier in the year, and that the Indian contingent had brought with them more or less cholera into Malta. This latter importation appears to have been looked upon by the Maltese authorities, civil and military, as of little moment; and, as to the Red Sea cholera, the Egyptian health authorities glorified themselves in having stopped its progress into Egypt and the Mediterranean by a vigorous quarantine. The news from Morocco, if it be confirmed, will show that the Levantine sanitary authorities have been indulging in a fool's paradise, and that quarantine has once more proved, as it must prove, a delusion and a snare.

QUINOIDINE AS A FEBRIFUGE.

AT a late meeting of the Académie de Médecine de Paris, M. Burdel, of Vierzon, read a paper on the Febrifuge Action of Quinoidine in the treatment of Telluric Fevers. M. Burdel remarked that this resin-alkaloid possesses distinct febrifugal properties, and that it is closely analogous in its action to quinine. He finds that, like quinine, it may be freely administered, and with good results, in telluric and benignant intermittent fevers. But it is in quartan fevers and in telluric cachexia that it exerts a specially well-marked action; in these it is even superior to quinine. Like all analogous febrifuge remedies, quinoidine should be given for four or five weeks consecutively, in successive but properly timed doses. Its relatively low price is a great point in its favour. It cannot, M. Burdel thinks, supplant quinine in the treatment of intermittent fevers of an acute type, but it may even in these be a useful auxiliary; whilst in chronic cases he believes that it is actually superior to quinine.

THE "EURYDICE."

AMONG the sad and painful incidents of the catastrophe to the *Eurydice* was the loss of her surgeon, Robert Murdoch, M.B. Glasgow. Mr. Murdoch graduated in Glasgow in 1872, and distinguished himself in medicine in the University as he had previously done in mathematics at the Kilmarnock Academy. In 1876 he entered the Royal Navy as one of the first five candidates selected after an examination open to medical graduates of the three kingdoms.

DR. GOLDIE, the medical officer of health for the borough of Leeds, in his report on the state of health in his district during the month of July, directs especial attention to the unusually high proportion of deaths from the seven principal zymotic diseases within that period. Not less than 175 deaths were recorded from the diseases referred to, representing a death-rate of 6·8 per 1000. The excess was chiefly observed with the deaths from diarrhœa, 117 deaths having been registered from this cause during the month, as compared with 8 during the corresponding month of 1877. On this excess of deaths from diarrhœa in July last, Dr. Goldie observes:—"The cause, to a very great extent, lies in the difference of the heat of the two periods. The past month was excessively hot, and included several very dry days; whereas July, 1877, was neither so hot nor so dry. Wherever filth was accumulated, the burning rays of the sun would produce such emanations as would be quite likely to create purging. Helpless infants, caged up in filthy yards, courts, and alleys, seem to succumb quickly under such circumstances."

THE *United Service Gazette* reports that only four applicants responded to the advertisement of the Medical Director-General of the Navy, and, that out of these, one was physically unfit, and the other three failed to pass the examination. We learn from another source that the Director-General of the Medical Department of the Navy, with the concurrence of the Admiralty, will allow candidates for the Indian Medical Service who passed the required examination on the 12th instant, but did not take a sufficiently high place to obtain a vacancy, to be entered as surgeons in the navy.

IT is contemplated to form a new quarantine establishment at the Cape, and Houti Bay is spoken of as a likely locale. The authorities of the colony still choose to adhere to the antiquated and useless system of quarantine, that has been abandoned in the United Kingdom for some years, and, indeed, exists only in Turkey, Spain, and Portugal. As some change at the Cape is necessary, the Colonial Government would do well to inaugurate a reform, and in so doing take a leaf out of the book of port sanitary authorities at home.

The Lancet Analytical Commission.

REPORT
ON THE
FOOD PRODUCTS
EXHIBITED IN THE
FRENCH AND ENGLISH DEPARTMENTS
OF THE
UNIVERSAL EXHIBITION OF PARIS.

IT is a universal law of nature that all living things must dine; but, confining our remarks to the human subject, the question *how* they dine is one of considerable interest and importance. Usually, the more civilised a people are the better they dine; and, applying this test to the French people, it will be apparent—as will be shown hereafter, since we intend to treat in the first place of the French food products exhibited—that French civilisation has attained a very advanced position indeed. The Englishman dines substantially and well, but with less refinement and variety than his French friend and neighbour.

The French Food Collection, as would be naturally anticipated from the excellence of the soil and climate of France, presents many great and important peculiarities. Thus the extensive cultivation of the vine leads to the production of a vast number of different wines, and especially of red wines, which are the very best that the world produces. The same widespread cultivation of the vine also renders spirit or alcohol very abundant, including *eau-de-vie*, or brandy, which is produced in France also of a quality not to be equalled elsewhere. This abundance of alcohol, again, leads to the fabrication of a great variety of stimulants, condiments, and liqueurs, many of which will be noticed here-

after, and in the preparation of which much skill and ingenuity are expended. Again, this abundance and cheapness of spirit allow of the preservation in it of a great variety of fruits, which, on account of the mildness of the climate, are likewise abundantly produced.

Then, for the same reasons of soil and climate, France is a great oil-producing country. Everywhere in the southern portion of the kingdom the olive tree is to be seen bearing its myriads of small, and, when ripe, plum-like, somewhat insignificant-looking, berries, but which, when pressed, yield the bland, delicate, and valuable olive oil. In this, again, they are provided with the most suitable medium for the preservation of the fish, especially sardines, which abound on the coasts of Brittany, and the preserving of which alone constitutes a vast industry.

Furthermore, France is a great sugar-producing country. This also gives her facilities for the manufacture of preserves and the preservation of fruits generally. Again, in this sugar she has an additional source for the manufacture of alcohol.

In truth, it may be said of France that it is a land abounding in corn, wine, and oil, and that in it every man may sit under the shadow of his own vine and fig-tree.

Fish, fruit, and vegetables thus abounding, have led to the study and invention of various means for the preservation of vast quantities of these several kinds of food. So abundant are they, and so excellent are the means taken to preserve them, that they are largely exported to almost every country in the world, and constitute a great source of national prosperity and wealth. Thus France supplies to the world nearly all its crystallised fruits, as well as those preserved in spirit; its peas and beans, and other green vegetables; its olives, capers, mushrooms, and truffles.

From these few and brief remarks it will be apparent that the French food products exhibited in the International Exhibition, rightly understood and interpreted, must possess not only for France, but for the whole world, a high degree of interest.

It is not our intention, however, to notice all the articles exhibited, or to describe those of each exhibitor. The space at our command compels us to treat the subject in a briefer manner, and what we propose to do is to notice chiefly those exhibits which possess the greatest novelty, interest, and importance, and which we ourselves have had the opportunity of examining. We fear this course may occasion disappointment to some exhibitors, but there is really no help for it, for were we to enter as fully as might be done into the subject, we should, instead of occupying a few pages of this journal, fill a whole volume. Thus, for want of space, and other reasons, we refrain from giving any account of the various wines exhibited. These number many hundred different kinds and varieties, and to treat of this subject at all as it deserves would occupy very many pages of this journal. For similar reasons we omit to mention the names of the exhibitors of brandies and other spirits, as also of olive oil, of which alone there are not less than fifty exhibitors. Then, again, a great many firms exhibit numerous samples of wheat and flour. These, also, are out of the range of this report.

Lastly, we should not forget to notice the great care and taste displayed in the putting up of the majority of the French preserved provisions, and which are truly remarkable; every detail is carefully studied and carried out: the shape and manufacture of the enclosing bottles or other vessels, the form, colouring and quality of the labels, and even the corking and securing the bottles. There is in all these particulars a refinement rarely to be met with out of France.

The arrangement of the food-products adopted is a very simple and natural one: (1) cereals with their farinaceous derivatives; (2) bread and pastry; (3) oils, fats, cheese, milk, butter, and eggs; (4) meat, fish, vegetables, and fruit; (5) condiments, stimulants, sugars, and bonbons; (6) fermented beverages. This arrangement, in the main, we propose to follow, only we shall have but little to say under some of the above headings, including the cereals themselves, although rather more on their derivatives, the arrowroots and feculas.

Amongst the exhibitors of farinaceous products we noticed the following, and we had in many cases the opportunity of examining samples of their exhibits: Mons. R. Barlérin, of Tarare; Mons. N. J. Bloch, of Tomblaine; Mons. F. Boudier, of Paris; Messrs. Brun et Cie., of Lyons; Mons. A. Chapu, of Paris; Messrs. Chétard, Fils, et Chaumeix, of Clermont-Ferrand; Messrs. C. Delamarre et Fils, of Chelles; Messrs. Dolmaire et Toussaint, of St. Dié; Mons. Dutaut, of Paris; Messrs. Foussat, Durand, Darrieux, et Cie., of Bordeaux; Mons. P. Genet, of Nancy; Messrs. Givord et Hours, of Lyons; Mons. V. Jeanclaude, of Lunéville; Mons. F. Laporte, of Toulouse; Messrs. Leconte-Dupont, of Paris; Messrs. Maiche et Arnouilleau, of Foucauge; Mons. Marge, of Lyons; Messrs. Mathieu et Cie., of Villars; Mons. A. Mauprivez, of Paris; Mons. L. Morel, of Epinal; Mons. J. T. Moricelly Ainé, of Marseilles; Mons. A. Périmon, of Neuilly; Messrs. P. Pesier et Cie., of Valenciennes; Mons. Felix Potin, of Paris; Messrs. Roche et Fils, of Rochefort; and Société Anonyme "La Marseillaise," of Marseilles.

Mons. Barlérin has been good enough to afford us the opportunity of examining his "Farine Mexicaine." Judging from the statement made respecting it in Mons. Barlérin's prospectus, it must possess properties little short of the miraculous. "It is now a certain fact that those persons who have died of disease of the chest did not make use of the 'Farine Mexicaine,' for if they had they would now be still full of life, it being well ascertained by science that all diseases of the chest are curable by the 'Farine Mexicaine.'

Amongst several other arrowroots and farinas, Mons. Chapu exhibits a "Tapioca de l'Etoile." This consists of Brazilian arrowroot, or the farina of the manihot. This is particularly well adapted, from its solubility, for thickening soups. The sample we examined possesses a beautiful white colour. It is evidently very carefully prepared, in a form suitable for soup. Another of his exhibits is "Tapioka da Estrella." This is a very superior quality of Brazilian arrowroot.

Messrs. Chétard et Chaumeix, manufacturers of pâtés alimentaires, exhibit "Semoule Diastasée" and "Racahout d'Auvergne." These preparations are made from the wheat of Auvergne, which is stated to be particularly suitable for the manufacture of semoule, since they approach in character the hard wheats of Africa and Taganrog, and contain, like them, a larger proportion of nitrogenous matter and gluten than the soft wheats. The semoule is in a state of coarse powder, and is of a brown colour, due to its having been subjected to the action of heat, or diastased. The racahout is in the form of a fine flour, of a light brown colour, also due to careful torrefaction. Both these articles, from their nutritious properties, and from the partial cooking which they have undergone, whereby part of the starch has become converted into diastase, are well suited for the alimentation of infants and children.

Messrs. Dolmaire and Toussaint, who are also fabricants of alimentary preparations, exhibit an article which they call "Manioca." This is in a coarse powder, and also browned from the action of heat. It is employed for thickening soups and sauces, for making gruel, in roasting meat, and frying fish, for all of which purposes it is well adapted by its composition and mode of preparation.

Mons. Dutaut exhibits a "Fécule Dutaut," or "Nursling's Food." It is taken in the form of pap, mixed with water, broth, or milk, according to the age of the child. The maker produces a considerable number of testimonials from medical men, certifying to the value of his food.

Mons. A. Mauprivez exhibits "Tapioca naturel." This is the product of the *Jatropha manihot*. As imported it is in the rough state, and in large masses, which contain impurities, and are of a bad colour. The tapioca has, therefore,

to be subjected to treatment whereby the foreign matters are removed and the masses reduced to a convenient size for thickening soups, or for boiling with milk. Tapioca thus purified is one of the most useful and nutritious of the arrow-roots.

Messrs. Moricelly exhibit samples of "Semoule" and "Semoulette." These are of very fine quality and superior manufacture, and are made from the hard wheats of Algeria, which, with those of Taganrog, are the best suited to this manufacture, as also that of Italian paste.

Mons. Roche, pharmacien, exhibits a "Farine Diastasée," intended especially for the nourishment of infants, and the composition of which he very candidly makes known. It consists of 830 parts of baked wheat flour, 100 of barley flour, 60 of sugar of milk, and 10 of bicarbonate of potash, with, in some cases, 20 parts of phosphate of lime. The barley flour is added to obviate any tendency to constipation which the wheat flour may produce, the potash is to correct acidity, and the phosphate of lime to supply that necessary constituent to the bones and growing tissues. The formula is certainly a good one, and the preparation carefully made. From its sweetness we judge that it contains some white sugar, and from its odour, also, a flavouring of vanilla.

Some of the makers of starch and feculas are also manufacturers of dextrine and gum; and others, again, of "Sirops massés," or consolidated syrups. Thus Messrs. Leroux, Louvet, et Fils, of Rouen, manufacture, in addition to starch, both dextrine and gum.

Messrs. Lefevre and Olivier, of Rueil, fabricants of glucose, very kindly invited us to visit their manufactory, an invitation of which we regret we were unable to avail ourselves.

Mons. V. Jeanclaude, of Lunéville, gave us the opportunity of examining a sample of their "Sirops Massés de Fécules." This was hard, white, dry, and sweet, and when burned it left only a trace of residue. It was evidently a syrup of very superior manufacture and quality. This article is now much used by brewers, taking the place, to a large extent, of malt, the term "malt beverages" having now become in many cases a misnomer. The law in England allows the use of sugar and several bitters, so that it is quite possible to make a very palatable beer which does not contain a particle of grain, malt, or hops.

A great many bakers exhibit "Gluten Bread"; in fact, the number who do so is really surprising, and makes one believe that diabetes must be a very common complaint in France. Mons. Bonnefoy, of Paris, exhibits "Pain de Gluten" in two or three convenient forms. The loaves are small, very nicely made, and resemble outwardly, in form, colour, and even weight, ordinary bread. Dr. Ruelle certifies to the superior quality of the gluten from which they are prepared, and to the care and pains bestowed by Mons. Bonnefoy on the manufacture of this description of bread. The loaves are sent daily through the post to all parts of France, and even to England.

While France has been long celebrated for its bread and pastry, it has until recently been much behindhand in the manufacture of biscuits, owing, doubtless, to the fact that hitherto they have not been much consumed, and, consequently, there has not been any great demand for them. Now, however, as the taste for biscuits is increasing, and English kinds make their way in considerable quantities into France, more attention is given to their manufacture. A biscuit may be described as a concentrated form of food, exceeding in nutritive value in some cases even bread itself, owing to the small quantity of moisture contained in them, sweeter and pleasanter to the palate than ordinary bread, but far less rich, and consequently less indigestible, than most descriptions of pastry. Their increased consumption, therefore, from a health point of view, is to be desired.

Amongst the many manufacturers who are exhibitors of biscuits are the following:—Mons. E. Barbot, Rochelle; Mons. W. Dennis (the American Company), Paris; Mons. P. Deschamps, Paris; Mons. P. Gondol, Paris; Mons. Deshages, late Letourneur, Havre; Messrs. Olibet Fils, Talence; Messrs. J. Sigaut, Paris; Messrs. Thebaud et Hubert, Nantes; Messrs. Vendroux, Clement, et Cie. (Société Anglo-Française), Calais.

Messrs. Dennis et Cie. manufacture a great variety of biscuits, including "Boston crackers," a biscuit of American celebrity. They were good enough to submit to us a variety of their products, which were of excellent quality, and carefully manufactured. They showed us also a sample of a biscuit prepared in large quantities for the Russian army, consisting mainly of rye and pollard. They were excessively hard, and would require much soaking before they could be eaten, and supposing them to be digested, it is still difficult to understand how they could possibly keep body and soul together.

Mons. Deschamps exhibits a biscuit of pleasant crispness and very delicate flavour, which he names the "Biscuit Viennois," as also "Croquettes Hongroises," likewise of very agreeable taste. The flavour and manufacture of these biscuits seem to be unique, for among the very many different kinds we have examined we have not met with any to resemble them. Messrs. Deshages make a "biscuit à potage" and sea biscuits. The speciality of the well-known house of Messrs. Béhu et Sigaut is the manufacture of different kinds of gingerbread. This description of cake has of late years gone somewhat out of fashion in England, although in our annual fairs the trade in it still flourishes, and the gingerbread-nut is, to our fancy, one of the pleasantest forms which gingerbread is made to assume. In France and Germany it would appear that gingerbread still retains its position; of this fact the old-established house of Messrs. Sigaut, employing as it does over a hundred workpeople, is a sufficient witness. Before we had the opportunity of examining the various productions of this firm, we had no idea of the perfection to which the manufacture of gingerbread could be brought, or the extent of its consumption. Quoting from *Le Panthéon de l'Industrie*, we find the following given as the quantities of the principal materials used in their manufactory in the year 1866:—"120,000 kilogrammes of wheat flour, 180,000 kilogrammes of rye, 400,000 kilogrammes of honey and sugar, 12,000 kilogrammes of candied fruits, 15,000 kilogrammes of almonds, and 500,000 eggs." Then, as regards machinery, there is a mechanical saw to cut the gingerbread, a machine to grind the vanilla, a machine for cutting up the candied fruits, a movable machine for cutting pastry, a machine to separate the yelks from the whites of eggs, a machine for skinning almonds, a machine for moulding the gingerbread; all these being worked by steam-power. Among the samples of gingerbread examined by us were "Pain d'épice au Seigle" (that is to say, with rye), "Pavé de l'Exposition," "Carrés Garnis de Fruits," "Carré Sigaut à la gelée de fruits glacée au Rhum," "Nonnettes glacées à la vanille" (in the form of small thick round cakes), and "Nonnettes de l'Exposition glacées aux fruits." The whole of these are put up in a style of great elegance and richness, some of the labels being perfect works of art. The Messrs. Sigaut manufacture other cakes and sweetmeats, and one we were especially curious to see, and to which they have given the singular name of "Biscuits Parlants." On examining these, we found that they owed their name to the fact that each biscuit had bound round it a piece of paper bearing a motto.

The Société Anglo-Française (Messrs. Vendroux, Clement, Verlingue, et Cie.) have a large biscuit manufactory at Calais, and make not only French biscuits, but a great variety prepared in imitation and bearing the names of the best known kinds of English biscuits. The number of these varieties, differing only in very slight particulars, has become really embarrassing, and it is impossible to do more than single out for notice a very few. That there should be so many different sorts of biscuits depends on the various tastes of consumers, each, we suppose, having his favourite kind. Amongst the English-made biscuits which more particularly attracted our attention, rather from their novelty and appearance than anything else, were the "Balmoral," in imitation of rural objects; the "Croquets," containing almonds; the "Osborne fourré," which consists of a plain biscuit covered on one side with a thin coating of syrup or jam. Lastly, the "Star" biscuit, so called from having a white or pink star made from a most pleasantly flavoured sugar in the centre of each biscuit, the sugar imparting a bright and pleasing appearance to the biscuits. The "Vanilla drop" is also a very nice fancy biscuit. Amongst the French biscuits we noticed the "Algérien," which are flavoured and ornamented in the centre with pieces of preserved fruits; the "France," a plain, useful, and delicately made biscuit; "Pistache," resembling "Croquets," but instead of almond containing pieces of pistachio nut. Lastly, "Rocailles," a rough and rocky biscuit, into the flavouring of which almond largely enters. Many of the biscuits manufactured by this firm are very nice, and obviously prepared with considerable care.

A highly important industry consists in the preparation of olive oil, the tree which furnishes this oil growing principally

in Languedoc, Provence, and in Corsica. The olive tree, so far as relates to the colour and shape of its leaves, resembles the willow, the upper surface of the leaves being dark green, while the under-surface is of a light silvery-grey colour. It blossoms in the early spring; the flowers, which are axillary and grow in clusters, being small, delicate, and of a yellowish-white colour. The unripe fruit, as everyone knows, is of a pale green, but when ripe it becomes dark and of a reddish-blue or plum colour. The olives are usually gathered in the months of November and December, but the time is often extended much beyond this; yet it is desirable that the berries should not be too ripe. Those which are hand-picked are the best, being free from bruises, but on account of the large size of many of the trees this is frequently impracticable, and then the berries are obtained by shaking and beating the branches, the olives falling on to cloths spread on the ground to receive them. This method of gathering is alike injurious to the berries and trees. In order to obtain the oil, the olives are subjected to trituration by millstones. The thick pulp thus obtained is placed in bags, and submitted to gentle pressure. The oil thereby expressed has obtained the name of "virgin oil," and is of the finest quality. The contents of the bags, after being treated with boiling water, are again pressed, when a second quantity of oil is obtained of a coarser quality. The pulp is then once more immersed in boiling water, subjected to further trituration and renewed pressure, when an additional quantity of oil is obtained, used generally for greasing purposes. Lastly, the cake which remains is again triturated, and, after treatment with acids, is submitted to a final very strong pressure, an oil being obtained which is used in the fabrication of soap. The residuum is employed either as manure or for fuel. The exhibitors of olive oil are very numerous, and it would serve no useful purpose merely to enumerate them; but the oils which have led us to make the preceding remarks are those of Messrs. Bessède Fils, of Marseilles.

The principal part of the vinegar manufactured in France is not made, as it is with us, of malt and grain, beer, or cider, but, as one would naturally suppose from the extent of the cultivation of the vine, from the grape; the quality of the vinegar improving with that of the wine from which it is prepared. For reasons with which we are not well acquainted, the wine vinegars of Orleans have a great reputation, which is shared by those of Bordeaux. The vinegar is generally made from white, but may also be prepared from red wine. Wine vinegar is a very different and superior product to that from malt, it being stronger in acetic acid, more ethereal and aromatic, and containing also the bitartrate of potash of the grape. Among the makers of vinegar we noticed the following:—Mons. Boudin, Mons. A. Bornibus, Paris; Messrs. J. Bréton, of Orleans; Mons. E. Cruchet, also of Orleans, whose house was founded in 1790; Mons. Dessaux; Messrs. Louit Frères, of Bordeaux; Mons. E. Moraux, of Cambrai; Messrs. Maille et Tandeau, of Paris; Messrs. Renaud et Duallé, of Bordeaux.

Messrs. Bréton exhibit samples of vinegar prepared both by the old or slow process and the quicker or Pasteur's process. By the latter the alcohol is converted into vinegar in about one-fifth of the time occupied by the old process; moreover, it is stated there is by it a considerable saving of material, while the results obtained are equally satisfactory. The active agent in the transformation of the alcohol into vinegar by Pasteur's process is a fungus, well known in England, where it has been employed on a small scale by householders under the name of the vinegar plant. Messrs. Bréton employ the new process, but, owing to circumstances, we have not had the opportunity of examining samples of their vinegars; from the information, however, which has been communicated to us, we do not doubt that they will bear comparison with those of the best manufacturers.

Of the vinegars exhibited by Mons. E. Cruchet we have examined three samples—one of ordinary wine vinegar, one ten years old, and the third flavoured with tarragon. These vinegars were of good quality, pungent, aromatic, and pure.

We visited by invitation the old established manufactory of Messrs. Maille and Tandeau, of Grenelle, Paris, and were there shown a variety of large vessels filled with vinegar—some aromatised, others flavoured with a great variety of vegetable substances, including truffles, mushrooms, raspberries, &c. We were informed that their vinegar manufactory was at Orleans. We did not examine samples, but we can bear testimony to the fragrance and apparent excellence of the vinegars. They possessed strongly the odour of the different herbs with which they were impregnated.

Messrs. J. Renaud and Duallé, an old-established firm of Bordeaux, make specially a vinegar which they have denominated "Vinaigre de Bordelais," which they guarantee to be absolutely pure, and samples of which we have examined with very satisfactory results. We have also examined, with the like favourable results, samples of their aromatised and tarragon vinegars.

To some vinegars various aromatic substances are added, with a view, as is stated, to produce what is termed aromatised vinegar (vinaigre aromatisé); in other cases, certain vegetables are immersed in the vinegars until they acquire their respective flavours—as, for instance, tarragon, which is so much used in France.

As might be anticipated, the exhibitors of "Conserves Alimentaires" are exceedingly numerous, since the number of articles preserved is so very great. They include different kinds of meat, especially whole fowls and game, pâtés de foies gras, cockscombs, various descriptions of fish, as lobsters and crayfish, and particularly anchovies and sardines; while amongst vegetable substances may be mentioned particularly various descriptions of dried vegetables; vegetables preserved in liquids; endless peas, beans, mushrooms, truffles, and capers; fruits dried, crystallised, and preserved in spirit, including olives, chesnuts, plums, and a great variety of other fruits.

It would be impossible in the compass of this report to give any general description of the various products exhibited in the cases under the headings "Substances Alimentaires," and "Conserves Alimentaires." All we can do is to notice briefly a few of the above-named products. Amongst the exhibitors whom we particularly noticed may be mentioned the following:—Mons. Beauhaire, of Montoire; Mons. A. Bornibus, of Paris; Messrs. Brard et Cocary, of Lorient; Mons. Biardot, Paris; Mons. C. Chevalier, Puteaux; Mons. P. Flon, Mons. Fourcade, Nantes; Messrs. Lermat, Robert, et Cie., Bordeaux; Messrs. L. Levesque, Nantes; Messrs. Louit Frères, Bordeaux; Messrs. Maille et Tandeau, Paris; Messrs. Pellier Frères, Mans; Mons. L. Reynaud, Chambéry; Messrs. Rödel et Fils, Bordeaux; Mons. J. M. Pommery, of Meaux; Messrs. Phillipe et Ganaud, Nantes; and Messrs. A. Salles, Paris. Messrs. Brard and Cocary exhibited preserved vegetables, especially peas and beans. Of these we are not able to say anything, as we did not examine samples, which we should have been glad to have done, not only in this, but also in some other cases, in order to satisfy ourselves of the absence of copper. The use of copper to colour vegetables in France is strictly prohibited; nevertheless, a few years ago, the preserved peas and beans imported into this country from France were nearly always coloured with this metal; and, even at the present time, it is no uncommon circumstance to meet with samples which are thus coloured. This remark leads us to notice the invention of another exhibitor—Mons. Biardot, of Paris. This gentleman has succeeded in devising a process whereby he is enabled to fix the natural green colour of almost all vegetables, and this in a very unobjectionable manner, and without the aid of a particle of copper or any injurious substance. Mons. Biardot describes the process as very successful, and, if it be also permanent in its action, then we consider that the inventor will have accomplished a very useful object. The preserved peas, beans, and pickles now sold are of a dull-yellowish or olive-green colour—an appearance which may be safely accepted as proving the absence of copper; but still they are not so sightly as are the same vegetables with their natural colour, and it will surely be a gain if their green and fresh appearance can be preserved in a harmless manner.

Mons. M. E. Fourcade, of Paris, exhibits a compressed meat, but we have not been able to examine any samples.

The house of Messrs. Louit Frères dates back as far as 1825, and it possesses three manufactories. At the one, "Turenne," fruits and vegetables preserved in vinegar, and sardines and anchovies are prepared; at another, "Bouscat," vinegars and mustards are made; and at the third, "St. Sernin," chocolate and pâtés for soups. We have examined a variety of the articles exhibited by this firm, including several descriptions of pickles. We would observe, in the first place, that nearly all French pickles are prepared with wine-vinegar. This at once gives them, as must be allowed, a superior character to English pickles put up in malt-vinegar; wine-vinegar being so much lighter, more fragrant and aromatic. Too frequently, however, the vinegar so em-

ployed is aromatised or flavoured—very often with tarragon, the taste and smell of which is imparted to all the vegetables contained in the pickles; the individual tastes of these being altered and masked thereby. The pickles of Messrs. Louit Frères which we have examined include mixed pickles, onions, gherkins, and "blé de Turquie"—a small description of the tender and unripe pods of maize or Indian corn.

The mixed pickles are most tastefully arranged in the bottles, and include one or two vegetables, and even f uits, not used by us, as celery, carrot, maize, truffles, and even cherries and gooseberries. With the exception of the carrot these all form pleasant additions, and to the carrot there would be no objection were some means taken to soften it, and to remove its rawness and hardness. The corinchons or gherkins are the smallest and youngest possible, and absolutely free from copper. The onions are equally small and delicate, white, and semi-transparent. The younger pods of the blé de Turquie or Indian corn, so neatly arranged in the bottles, present an elegant appearance, and form a tender and very agreeable pickle. The sardines and anchovies are put up with equal care in oil, which the country itself so plentifully supplies, and the bones are all carefully removed, a work of very considerable labour.

Amongst other things Messrs. Louit exhibit, in small, very prettily shaped glass barrels, a mustard of which they are the inventors, which they call "Moutarde Diaphane"; these barrels are so nice-looking that they may be placed at once upon the table without the necessity of transference to a mustard-pot. The reader must understand at the same time that French mustard, as we shall presently show, is a very different article from its English namesake. The chocolates of Messrs. Louit Frères will be noticed in another part of this report.

Messrs. Maille and Tandeau, like Messrs. Louit Frères, are manufacturers of vinegar and mustard, and preparers of pickles. When we visited their factory we witnessed the process of manufacture of French mustard. In the case of English mustard it is the interior or farina only of the seed of the brown and white mustard which is used; in the case of genuine mustard the farinas of these two kinds are mixed together in different proportions. A few years since a genuine or unmixed mustard was almost unknown in this country, but it is now largely manufactured by all the most considerable makers, although an article is still made and sold in large quantities as mustard which consists of a mixture of wheat flour, turmeric, and mustard, with sometimes other and more objectionable substances. But French mustard is a very different article to either of these, and is thus prepared: While the English makers reject the husk of the seed, the French grind down into a fine powder or paste the whole of the seed, including the husk, and mix it with wine-vinegar, variously flavoured, often with tarragon. The preparation thus made has the consistence of a thin paste, and is ready for use at table without further trouble. French mustard is more aromatic thus made, much milder, and less pungent than English mustard.

Much care and taste are likewise exercised by this firm in the selection of the vegetables intended for pickling, and their arrangement in the bottle. By this firm, also, the anchovies are deprived of the bones before being put up, and amongst other interesting operations we witnessed the preparation of the so-called "Olives farcies." The fleshy part of each olive down to the stone is removed by cutting round and round in the same way as one would peel an orange or apple in one long piece. The stone being thus taken out, the olive gathers itself up again by its own inherent elasticity into nearly its original form; the centre formerly occupied by the stone is then stuffed with a piece of anchovy and a few capers, and this is the "Olive farcie." In this state they are put up into bottles in vinegar ready for the use of the chef, who adds them to many dainty dishes. The operation above described is, of course, tedious, and must add considerably to the cost. Other articles we noticed were "Moutarde Rouge," "Moutarde Verte aux Fines Herbes," and "Moutarde aux Truffes."

Mons. Beauhaire also exhibits samples of "Moutarde Rouge," the manufacture of this description of mustard being the speciality of his firm. In its preparation it would appear that vinegar is not used, but, in place of it, the juice of red grapes, to which the mustard owes its chocolate-red colour. It is fragrant, and more pungent than French mustard usually is, and of an agreeable, fruity, acidulous taste.

Messrs. Pellier Frères are preservers on a very large scale of alimentary substances, both animal and vegetable—meats, fowls, game, fish of nearly all kinds, and a great variety of vegetables. They possess several manufactories, some of them established many years since; these are placed in the most convenient situations for obtaining a supply of the several articles preserved by them. To enumerate even the names of their different preparations would occupy pages; out of the extensive list the gourmand would be sure to find some things which would please even his fastidious taste.

In a communication with which Messrs. Pellier have favoured us, they make the following important statement: "All our vegetables, peas, beans, and flageolets, are prepared without an atom of copper."

Correspondence.

"Audi alteram partem."

ON THE ADMINISTRATION OF HYOSCYAMINE.

To the Editor of THE LANCET.

SIR,—As my name has of late been more than once mentioned in THE LANCET in connexion with the determination of the dose of hyoscyamine, I may be permitted to add a few words to what I have already written on the subject, more especially as I am not only willing but anxious that statements regarding my first experiences of the drug should not in any way militate against the subsequent and more mature observations of myself and others.

In publishing statements regarding the action of a strong drug, it is essential that the preparation of the drug which has been employed should, in its main features, be described. I have frequently had occasion both to speak and to write in justification of what I have published about the actions of hyoscyamine, and have almost invariably found that the reason for wide and even dangerous differences between what had been published by me and what had been observed by others was that they had used a different preparation from that which I had employed and described.

As I stated in the West Riding Asylum Medical Reports (vol. vi., page 82), the drug used by me during a series of experiments extending over many months, was the amorphous alkaloid manufactured by Merck, and supplied by Harvey, Reynolds, and Co., of Leeds. When the drug reaches this country it is generally brownish in colour and somewhat syrupy in consistence; but I gather from a quotation which the *Pharmaceutical Journal* gives from *Neues Jahrbuch für Pharmacie*, Oct., 1872, that the amorphous alkaloid when first prepared is "a colourless, rather oily liquid in appearance, and smells very like conin," and that "on contact with air it rapidly becomes brown, thickens, and at the same time gives out an intensely disagreeable smell." The latter features are those which apply to the drug as used by me during the past four years. I have found different preparations to be nearly uniform in strength when they were first opened into, but have observed a falling off in potency when the hyoscyamine has been kept for some time in a dilute solution—a deterioration which has appeared to take place simultaneously with the assumption by the solution of a greenish tinge. Dr. Prideaux, of the York Retreat, who has made extensive and useful observations with the drug, employs the same preparation, procured from the same chemists; and if Dr. J. G. Sinclair Coghill had stated in the paper which he has published in THE LANCET of August 3rd what form of hyoscyamine had been employed by him, the value of his useful contribution would have been much increased. I have seen similar cases of urgent distress to that described by Dr. Coghill produced by small doses of Merck's extractive hyoscyamine (the amorphous form already described), but such cases are decidedly exceptional; and Dr. Coghill will, I hope, inform us whether he used half a grain of the extractive amorphous alkaloid, or of the so-called crystallised hyoscyamine, which is a white ashy powder of very variable strength.

Perhaps you will allow me to state in a few words what I know by personal experience regarding the gradual reduction

of the dose of hyoscyamine. While making observations on the influence of the drug on animals, I frequently gave three, four, and five grains of the amorphous alkaloid to cats and dogs without a fatal issue; but, being aware that some drugs are much better tolerated by animals than men, I determined in my first observations on human beings to employ a smaller quantity, and for the sake of avoiding the legal inconveniences which would no doubt have followed upon a fatal issue, I resolved, in the first instance, to take the drug myself. I took two grains in one dose, and the effects were well marked, but never at any time very dangerous. The pulse at first rose to 120, but again fell in the course of two hours. The pupils dilated rapidly, the mouth became dry; motion was impaired and drowsiness ensued. Interrupted sleep followed, and there were, during wakeful periods, illusions and paralysis of accommodation. Sleep was disturbed by exclamations made during the course of active dreams and delusional conversations. After sleep there still remained incoherence and aphasia, but I was sufficiently well during the course of the same day to resume my ordinary work.

In a few days I again took, for the purpose of securing more detailed observations, a dose of three grains of the same preparation. The effects, which were only more intense than those described above, will be found recorded in detail on page 77 of vol. vi. of the W. R. Asylum Medical Reports. The solution which I employed was the same which I had been administering hypodermically to animals, and the subsequent effects of a three-grain dose were so slight that I was able to resume my work on the morning of the next day.

On commencing to use the drug in the treatment of excitement, I in several instances used two-grain doses, but very soon reduced the quantity to a grain and a half, and again to one grain, which I employed for some time as a standard dose in mania. Since about July, 1876, till quite recently I have confined myself to three-quarters of a grain when I have aimed at the production of the physiological effects of the drug by a single dose; but now I rarely give more than half a grain, and find it sufficient. I have seen frequent instances in which great prostration has been produced, but these instances have generally been when comparatively small doses have been given, and the effects of the drug have soon passed off without the employment of any antidote whatever.

I have no desire to encourage the administration of large doses of hyoscyamine. Prolonged use of Merck's extractive alkaloid has led me to think that doses of one, two, or three grains would now be unjustifiable either to give or to take, but I think there is a danger of going to the opposite extreme, and reducing the dose so much that the powerful revulsive action of the drug may be lost. In my hands the best results have always been produced by single large doses.

Two things require to be considered in discussing the dose of hyoscyamine. The first is, variation in the strength of the drug; the second is, the nature of the cases in which it is given. I am afraid that the extractive form of hyoscyamine is liable to variation in strength, according to the care and elaboration bestowed on its preparation. This, however (having constantly used Merck's preparation), I have never to any great extent experienced, but I believe it possible that the drug may be becoming stronger by virtue of increased aptitude in the preparation of it. I have no means of determining whether one grain of Merck's amorphous alkaloid is stronger now than it was three or four years ago. I have no desire to renew my "human" experiments, and am prohibited, like so many others, from employing one of the lower animals for the purpose.

With regard to the second consideration, I can only state at present that I have seen two patients, to each of whom a quarter of a grain of hyoscyamine was administered hypodermically from the same bottle and almost during the same minute. In the one case there ensued complete freedom from long-continued and destructive excitement, followed by quiet sleep, in which the pulse remained regular and normal in rapidity. The ultimate result was the continuance of a state of quiescence for several days. In the other case there was much prostration, accompanied by occasional outbursts of restless excitement, which, after a time, were followed by prolonged sleep. No bad consequence ensued, the patient having resumed her natural state on the day of administration. The first case was one of pure mania, which is, almost without exception, successfully treated (as far at least as individual paroxysms of excitement are concerned) with hyoscyamine. The second case was one of acute dementia (so-called), in which repeated observations have led me to conclude that hyoscyamine is not commendable.

In conclusion, I think that those who write about hyoscyamine should be careful to use Merck's extractive alkaloid, or at least to state what drug they have employed. If Merck's alkaloid is to be employed, I think half a grain should be regarded as the *maximum* dose, which should not be repeated except after the lapse of at least twenty-four hours. When continuous doses are given, the *maximum* should be a quarter of a grain three times a day, and the administration should be interrupted at intervals on account of the toleration which, as I have proved with regard to animals, and have frequently observed with regard to men, is readily established.

When hyoscyamine is administered hypodermically, the doses should not exceed one-third of those mentioned.

I remain, Sir, your obedient servant,

R. LAWSON,
Medical Superintendent of the Wonford House Hospital for the Insane, Exeter.

August 3rd, 1878.

To the Editor of THE LANCET.

SIR,—Very recently I had occasion to give hyoscyamine, and as the effects of the dose given were, in my opinion, somewhat remarkable, I think a record of them may be of interest to the profession. The dose given was one-sixth of a grain, and as the patient was my own wife, I had an opportunity of observing the effects from beginning to end. After the medicine had been taken about an hour a sensation of swimming in the head was complained of, and very soon after there was an excited and rapid action of the heart, quickly followed by excessive restlessness and constant tossing about in bed, and then when she got out of bed she could not stand. After the medicine had been taken for about two hours she became quite delirious, and remained so for many hours. One remarkable feature in the symptoms was the effect which the hyoscyamine produced on the sight, and which effect lasted to some extent for many hours on the following day. She took up the box with the pills and said that some of them were larger than the others, and I must have given her one of the larger ones. I then looked at the pills and found they were all the same size, and there was other proof that her sight, as to size of objects, was perverted, and again there was no doubt that her vision as to colour was much affected. Perhaps I ought to say that the medicine was given to produce sleep, as there had been very great sleeplessness for two or three weeks. I would only add that the pills were made in London by a very respectable chemist.

I remain yours faithfully,

CHARLES WM. CHUBB.

Torpoint, Devonport, August 20, 1878.

"ON DIPHTHERIA FROM A PREVENTIVE-MEDICINE POINT OF VIEW."

To the Editor of THE LANCET.

SIR,—Perhaps you will allow me a few lines in reply to Dr. Russell's strictures on my paper on diphtheria.

In large columns of figures it is most difficult to entirely avoid errors in copying or printing, but the only numerical error Dr. Russell claims to have discovered is an uncorrected typographical one, and that it is so must be obvious to any one who will carry his eye to an adjoining column where the mean is given.

The statistics given never claimed to have any other source than the returns of the Registrar-General, but to a considerable extent they were necessarily taken from the quarterly returns, and not, as stated by Dr. Russell, from the tables referred to by him in the annual report for 1876; indeed, they could not have been, as my paper was printed some time before the report in question (only issued within the last few weeks) was published. Dr. Russell may not be aware that there is generally a slight difference between the sum of the quarterly returns published immediately and the returns in the more rigid corrected annual reports for the same period, and which do not as a rule appear until rather more than two years after; beyond giving an opportunity for criticism

the difference is practically unimportant. As to what deaths registered as "continued fever" should be statistically considered as cases of "enteric fever" is a difficulty more easily stated than solved; but the important and essential point is that, where different localities are selected for comparison, the same classes of disease should be rigidly adhered to in the statistics of each, and this has been done in every case in the statistics given by me. With the above qualifications the figures were absolutely correct, and, under any circumstances, as correct as possible.

As regards the objection to the populations of the counties, I may say that, as the period of eight years to which the statistics refer consisted of parts of two decades, 1861-71 and 1871-81, and the annual variation of population in the counties is so small comparatively, the enumerated population of 1871 (one of the years included) is, under the circumstances, a sounder basis to go upon than any estimated population; in this I am following the practice of the Registrar-General in the case of the counties.

The conclusions at which I arrived were, "That diphtheria everywhere prevails more fatally in rural than in urban districts, and that the reverse holds good in the case of enteric fever." Some observations in Scotland have led Dr. Russell to the singular conclusion that in England "enteric fever is more fatal in rural districts than in towns." On this point I prefer statistics to analogy. Statistics, however, are one thing, and their interpretation is another; the latter I consider one of the most responsible duties of a medical officer of health. Assuming for the moment that the statistics of rural districts did give an equal degree of comparative mortality for diphtheria and enteric fever, it would by no means follow, as Dr. Russell infers, that the local causes of the two diseases existed in an equal degree; for whilst, owing to the usual age of the patients and the sudden onset of the disease, it is most exceptional to find a case of diphtheria imported into a rural district, cases of enteric fever are constantly so imported, and in many purely rural districts upwards of 50 per cent of the cases of enteric fever can be directly so traced. If correction for such cases were practicable, the inverse prevalence of diphtheria and enteric fever would be still more marked in statistics of mortality.

I am, Sir, yours, &c.,
W. N. THURSFIELD, M.D., S.Sc.C. Camb.

August 26th, 1878.

THE HEALTH OF TENBY.

To the Editor of THE LANCET.

SIR,—In your article on the Health of English Watering-places in THE LANCET of the 17th inst., you call attention to the death-rate of various health-resorts, and say, truly enough, that "it has been complained that the Registrar-General's areas are larger than those of the watering-places themselves." Tenby has just cause of complaint on this score, having attached to it not only thirteen rural parishes, but a very unhealthy parish in the borough of Pembroke, ten miles distant, where the zeal of the authorities in the cause of sanitation may be measured by the fact that the medical officer of health in that borough lately complained that his report had been several months on the table unread! and where the annual rate of mortality for the three months ending June 30th last was 42 per 1000! With regard to the rural parishes immediately surrounding Tenby, they are remarkably free from disease, and a death in either of these is a novelty.

There is a manifest fallacy in estimating an annual death-rate from one quarterly return, as practised by the Registrar-General. This is shown in comparing the average death-rate of Tenby and Herne Bay. For the quarter Tenby shows a mortality of 26·8 per 1000, and Herne Bay 8·5; but for the preceding ten years the positions are reversed, the mortality of the former being 18·2, whilst that of the latter is 20·5. Of course the quarterly deaths, from whatever cause, have to be multiplied by four to estimate the annual rate, and thus five deaths from zymotic diseases occurring in one quarter would be calculated as twenty per annum in the quarterly report, although no deaths from the same causes might take place in the other three quarters. In the same way, if a boat capsized in the bay, and five persons were unfortunately drowned, they would be quadrupled, as regards the annual rate, in the next quarterly report. It may be said that this calculation is as fair for one place as another, to which I reply, it is unfair to all.

Now I will come to facts. The actual number of deaths in the town of Tenby from July 1, 1877, to June 30, 1878, was 90. At a low estimate the population of Tenby (exclusive of visitors) was 5500. This gives a death-rate of 16·4, instead of 26·8 per thousand. Although we exclude visitors from the estimated population, we cannot exclude their deaths from our mortality lists; and we find that of the 90 who died 10 were visitors. This reduces the death-rate of residents to 14·6 per 1000. Seven deaths occurred during the year from zymotic diseases (we are credited with 14)—viz., 2 from convulsions during whooping cough; 1 from pneumonia following measles; 2 from diphtheria (one brought from a distant town already ill with the disease, the other an isolated case); and 2 from "fever." This gives a death-rate of 1·3 per 1000, instead of 3·59, as it appears in the Registrar-General's return. Making a further analysis of our 90 deaths, we find that 19 were under one year, and 28 over 60 years of age, 8 being over 80. Of the causes of death: 14 died of diseases of the brain; 31 of affections of the heart and lungs; 19 of kidney, bowel, and liver diseases; 3 of childbirth or maladies connected therewith; 2 from accident; and 7 from zymotic diseases, as before-mentioned. Climatic influences cannot be credited with the deaths of the ten visitors, for three died of apoplexy, two of intemperance, two of chronic cystitis, one of phthisis, one (an infant) of marasmus, and one child of diphtheria (the imported case already referred to). In the year 1873 there were seven deaths from zymotic diseases, in 1874 one, in 1875 eight, and in 1876 one. I observe that the *Builder* of the 24th inst. contains a letter from a Mr. Burns vehemently condemning the sanitary state of Tenby. To this letter a full and satisfactory answer will appear in due course.

Trusting you will insert this in your next issue,
I am, Sir, your obedient servant,
DOUGLAS A. REID, M.D.

Church House, Tenby, August 27th, 1878.

MUMPS; METASTASIS TO BRAIN.

To the Editor of THE LANCET.

SIR,—The following case is, I believe, as far as public record goes, unique in the sequence of its events. I have carefully examined the descriptions of mumps by writers ordinarily accessible, and cannot find a parallel case. Medical friends, to whom I have referred, are equally unable to furnish any, either from their own experience or research. Watson's "Practice of Physic," vol. i., p. 297, third edition, after speaking of the transference of the disease from the parotid to the testicle, says:—"But sometimes a more serious transference takes place from the testicle to the brain. This I have never witnessed; but then, to say the truth, I have not often been called upon to treat the mumps, and my personal experience of it is limited. ..... Inflammation of the brain or its membranes has sometimes occurred on the disappearance of the parotid swelling, but it has much oftener supervened, I believe, upon the retrocession of the inflammation from the testicle or mamma."

Trousseau's ("Clin. Med.," vol. ii., Syd. ed.) description of mumps is most accurate and interesting. He records two cases of what he indicates as best designated by the term "febris testicularis"—a state of high fever, attended in one of the cases by delirium, a symptom not mentioned in the other. He does not seem to infer that there was in either case a retrocession of inflammation from the parotid to the brain or its membranes, but that there was general fever, attended with inflammation of the testicle. I would venture to suggest that, read by the light of the case which I am about to detail, there was in both cases "metastasis" to the brain first, and then from the brain to the testicle.

On April 16th a gentleman, aged twenty-six, called upon me to ask whether, having the mumps, he might go to the seaside. The left parotid was considerably enlarged, tense, and painful. I advised him to go home, keep warm, and take an aperient. As he left me, I said to him, jocularly, "Mind you don't take cold; it may go either to your brain or your testicle." Four days later—i. e., April 20th—I was requested to see him at home. I found him feverish, rest-

less, and nauseated; tongue covered with thick, yellow fur; bowels torpid. Parotid swelling much less, but not gone. Ordered aperients and febrifuge mixture. In the evening was again sent for. No action of bowels; vomiting; very restless and excited; head hot; severe pain behind left side of frontal bone; pulse frequent, not hard. Ordered to push the aperient freely.

April 21st.—9.30 A.M.: Passed a most restless night, very little sleep; much delirium. Pulse 130; temperature 106°. No action of bowels. The delirium is not absolute and continuous, but consists rather of very rapid and incessant speaking; coherent when he is spoken to, but at once falling into incoherence when left alone. (I have frequently observed a precisely similar condition in this respect in cases of rheumatic fever, where the cerebral membranes have been attacked on retrocession of the disease from the joints, and generally with fatal result.) The headache is on the left side, and he complains of it aching very excruciatingly in one spot above the left eyebrow. Continue aperients; ice to head; bromide of potassium every four hours; sinapism to nape of neck.—3 P.M.: Sent for in haste. I was told he was suddenly, to all appearance, dying. Skin cold and clammy; countenance livid. When I arrived there was some reaction, and he gradually rallied.—7 P.M.: There is no improvement. Ordered an enema, which remained.—10.30 P.M.: My colleague, Dr. Crompton, saw the patient with me. Agreed in the diagnosis. Whilst we were in the house slight involuntary action of the bowels occurred, and for a short time he seemed more rational. Decided to continue the purgatives and bromide. Complained of loss of power and sensation in his extremities, especially the lower.

22nd.—9.30 A.M.: A night marked by much the same symptoms, though not quite so restless as the previous; still headache on left side, and mental confusion. Bowels have acted more freely. Pulse 100; temp. 103°.—2 P.M.: All the severe symptoms much ameliorated. The change was so marked and sudden that I was at a loss to account for it, except on the supposition that the free action of the bowels had worked almost a miracle. Seeing that he wished to speak privately to me, I asked the attendants to leave the room, when he told me that his left testicle was very painful and swollen. On examination I found it about the size of a hen's egg. On each of the previous days I had asked him if he had pain in the testicles, and he had said "No," and for this reason I had not thought it requisite to examine them. One of the attendants, in doing something about him this morning, noticed the swelling for the first time. The sudden engorgement of the testicle seemed the key to the sudden relief of the urgent head symptoms.

23rd.—9.30 A.M.: Apparently well, but weak. Pulse 92; temp. 99·4°. Testicle still enlarged. No local treatment; continue bromide.

The patient rapidly recovered general strength, and the swelling of testicle subsided in a few days, and in about a week he left for Scotland. In some five or six weeks, however, he suffered from vertigo and impaired memory, and so evident were these symptoms that medical men whom he consulted advised him that his brain would be long before it fully recovered from the shock received.

A brother of the above, aged sixteen, showed slight symptoms of mumps at the same time, which seemed to yield in the usual way without treatment. A fortnight after I was called to see him at home, with the disease well developed, and in his case the testicle swelled, and was painful; but he had neither head nor constitutional symptoms of moment.

In reviewing the history of the first of these cases, it seems to me more natural to conclude that there was primarily a retrocession of the engorgement from the capillaries of the parotid to those of the brain or its membranes rather than to coincide with Trousseau in his adoption of Morton's theory of a febris testicularis.

I am, Sir, your obedient servant,

FRANCIS H. WALMSLEY,
Surgeon to Salford Royal Hospital.

Manchester, August 6th, 1878.

PIEDRA.

To the Editor of THE LANCET.

SIR,—The disease of the hair of the beard, described by Dr. Malley in THE LANCET of last week, does not appear to me certainly identical with the "piedra" described by M. Desenne. From Dr. Malley's account it corresponds much more closely with an affection which I have met with, and observed with much interest, during the past year. But I differ from Dr. Malley as to the nature of the morbid condition. In the specimens I have examined the existence of a vegetable parasite, and its influence in producing the special appearances observed, seem as distinct and unmistakable as in tinea tondens. I have been on the point of publishing an account of this curious affection for some time, but await the completion of woodcuts representing the naked-eye and microscopical appearances presented by the diseased hairs. I reserve any detailed account therefore at the moment, and merely state briefly the salient features of this parasitic invasion.

1. It is limited to the hair of the face, the scalp being free.

2. The part affected is the free extremity of the hair; the root and follicle are normal.

3. The knots are not hard like stone, nor are they multiple, as in the case of the piedra of Columbia, but enlargements formed by the splitting of the ends of the hairs in their broken extremities, the curling back of the opened fibres, and the adhesion to them of roe-like masses of sporules, round and refracting like those of ringworm, but smaller.

4. These sporules adhere to the cortex of the hair, encasing it completely where intact; but where the hairs are split up at the extremities the sporules may be seen in the interstices betweeen the fibrils.

5. In the case under my care the disease was cured by the simple process of clipping off the affected hairs.

Your obedient servant,

London, August 27. W. B. CHEADLE, M.D., F.R.C.P.

To the Editor of THE LANCET.

SIR,—As it is of importance to collect as much clinical evidence as possible concerning a new disease—more particularly a parasitic disease of the skin—before it is accepted as a fact, I would venture to occupy a portion of your valuable space to describe two varieties of hair that have lately come under my observation.

Some months ago Dr. Guterrez, of Columbia, showed me a few hairs taken from the head of a native, and sent to him by post. At the extremity of each hair and at irregular intervals there were situated small hard nodules, looking like ova pediculi. They were quite fixed—that is to say, would not slip up and down; but their chief characteristic was intense hardness, making a noise on glass like sand or minute stones. Dr. Guterrez said in his country the disease was called "stones," which seemed an appropriate name. I asked for permission to examine the hairs microscopically, but could not do so, as they had been promised to another medical man for the same purpose.

Shortly after this Dr. Cheadle, of St. Mary's Hospital, sent me some hairs that had been removed from a gentleman's beard. These hairs showed nodules visible to the naked eye, situated at irregular intervals, perhaps three or four on each hair, but none near the roots. The hairs were short-broken off, leaving a brush-like extremity, very similar to the condition seen in ringworm. The nodules had all the appearance of those in the first case, but lacked the intense hardness.

The hairs were macerated in liquor potassæ for twenty-four hours, well washed in ether, and mounted in glycerine. At each nodule, as seen with Hartnack No. 8, the hair was split up into a dense network composed of intercellular substance, in the midst of which were mycelium and spores. The first idea was that the disease was ringworm, but as no fungus could be found at the root of the hair and none on the skin, and also the spores themselves were much smaller than those found in that disease, the theory seemed improbable.

I do not know if this is the same disease described by Prof. Kaposi, and mentioned by Dr. Malley in your last issue. If it is not, there are two diseases alike in all particulars except their causation; at all events, I do not think they are the same as piedra.

I am, Sir, truly yours,

MALCOLM A. MORRIS.

Montague-square, August 27th, 1878.

WESTPHAL'S TEST FOR LOCOMOTOR ATAXIA.

To the Editor of THE LANCET.

SIR,—I have only just seen a letter in THE LANCET of the 17th inst. from Mr. W. Beattie Smith, house-surgeon, Stockton-on-Tees Hospital, in which he relates what he supposes to be an exception to the rule that patellar tendon reflex is absent in posterior sclerosis.

Mr. Smith must excuse me if I decline to accept a case in which there were not only no ophthalmic troubles, but "no pain anywhere," as a typical one of progressive locomotor ataxia.

I remain, Sir, yours, &c.,

August, 1878. THOMAS BUZZARD.

NOTES ON THE PARIS EXHIBITION.

(From our Paris Correspondent.)

V.—THE BRITISH SECTION (CONTINUED).

CONTINUING our investigations in Class 47 of this section, we next meet, according to alphabetical order, the very fine and interesting display of Messrs. W. J. Bush and Co., London. Their case shows the greatest variety of natural and artificial essences, which appear remarkable for purity and strength; an interesting collection of innocuous colours, which can be used for any alimentary purpose without fear or inconvenience; and excellent specimens of this firm's granulated preparations for making lemonade, ginger-ale, or other effervescing and artificial aerated waters.

Messrs. James Chambers and Co., of Great Tower-street, London, have a prominent corner in this gallery, in which they have gathered not only their own exhibits, but also those of Messrs. F. C. Hills and Co. and of Messrs. James Robins and Co., whose agents they are. Amongst the various objects exhibited, their samples of saltpetre, arsenic in lumps and powder, strong citric and oxalic acids, and bichromate of potash are very remarkable. They have also very brilliant blue and green varnishes. The specimens of sulphur, sulphate of copper, carbonate and sulphate of ammonia, and chemical products for agricultural purposes, which they exhibit for Messrs. F. C. Hills and Co., are also of excellent appearance. As much must be said of the sample of sulphate of iron exhibited for Messrs. James Robins and Co.

Near by is the exhibit of Messrs. J. and J. Colman's famous starch, indigo blue, and ultramarine blue. Nothing can surpass the excellence of these manufactures. The fineness of the product, and the beauty of colour so highly appreciated by laundresses, are perfect.

Amongst the pharmaceutical products shown by Messrs. Richard Evans and Co., of Denbighshire, are to be noticed their concentrated solution of carbonate of lithia and potash, and their zoedone or phosphate drink. The concentrated solutions of lithia and potash constitute a good therapeutical improvement, whilst the zoedone is an elegant and palatable tonic drink, containing the phosphates of lime, iron, soda, and potash.

Messrs. Forster and Gregory have exhibited some fine general chemicals, and some beautiful specimens of the three varieties of sulphur. But their exhibit is especially remarkable for the good preparations of chemicals used for the colouring and vulcanising of india-rubber.

At the corner opposite to that of J. Chambers and Co. stands in a good prominent position the joint show case of Messrs. T. Morson and Son and of Mr. A. W. Gerrard, F.C.S., of London. The whole exhibit is arranged with great taste. There are three tiers of bottles arranged in semicircular shape, with a pedestal composed of bougies and suppositories of all colours; whilst the base of the show case is occupied by the fine chemicals of Mr. Gerrard, arranged under glass covers. Messrs. Morson have especially exhibited their pepsine food and their new preparation of glycerol of pepsine. They have also made prominent a magnificent specimen of creasote from the wood, which for the last fifty years has been one of the "specialities" of their firm; and fine samples of essences and liquid dialysed iron. The exhibit of Mr. Gerrard comprises remarkably fine preparations of drugs in recent use; his salts of pilocarpine, the new diaphoretic, both very fine. His preparation of chrysophanic acid, now employed with success in the treatment of impetigo, is equally good. The three samples of aloine, or the active crystalline constituent of aloes, are very pure and brilliant. The three sorts, barbaloin, socaloin, and nataloin, are present, and equally fine. There are three specimens of the new and fashionable hydrobromides, those of quinine, conicine, and camphor. Thymol and salicylic acid are shown in elegant crystals. There is also an attractive sample of capsaicin, the active principle of capsicum, discovered by Mr. J. Thresh, and which figures for the first time in an exhibition. Mr. Gerrard has given a good place to the preparations of gelseminum, and is now busy making experiments for obtaining the pure alkaloid of the plant.

Messrs. Gidney, Clark, and Co. have made their case of varnishes doubly interesting by the exhibition of a splendid, and perhaps I should say unique, collection of fossil gums from New Zealand, Africa, the Borneo Islands, South America, &c., both in the rough state and clean. A huge lump of Kowrie gum, said to weigh 120 pounds, was found fourteen years ago in New Zealand and sent to this firm.

Messrs. Golding, Davis, and Co., alkali manufacturers, of Widnes, Lancashire, have exhibited specimens of their fine preparations of caustic soda, bleeching powder, and salt cake, manufactured by Hargreaves and Robinson's process.

Messrs. Griffiths, Fletcher, and Bardoe, paint manufacturers, of Cannon-street, London, have a special show-case for their "patent white" which deserves particular notice from a hygienic point of view. The consideration of the number of lives yearly destroyed by the employment of lead paints gives great value and interest to any invention which supersedes the use of lead, and presents none of its inconveniences and dangers. Several attempts have been made before to find a white paint which would do away with the poisonous consequences of white-lead; but various difficulties—as, for instance, want of covering power in the case of oxide of zinc—had rendered these trials ineffectual. Mr. T. G. Griffiths, of Liverpool, has found a white, with 20 per cent. greater covering power than white-lead, which is far less expensive to manufacture, and is quite innocuous in its preparation and employment. These three important qualities must ensure its success. The colour of the white is very fine, and it has the great advantage of resisting the effects of sulphuretted hydrogen gas or atmospheric influence. The manufacturers have given a practical illustration of this property of their product, by exhibiting in their case a board painted one-half with white-lead, and the other half with their patent white, and which has been subjected to the emanations of sulphuretted hydrogen gas. The side painted with lead has turned quite dark, whereas the other has preserved its colour. Another advantage claimed for the patent white is that it does not split or blister, has no chemical effect on metals, and is unaffected by the sun or by extreme heat of any kind which exerts a pernicious action on ordinary white paint. This renders it valuable for hot climates. In order to illustrate this property the exhibitors have shown in their case a painted plate of iron which has been subjected to a heat of 800° F. during six hours, with scarcely any change in the colour of the white. Amongst the samples of the white contained in this case is a very fine block of sulphide of zinc, which is also prepared by the same manufacturers. On account of the fineness, purity, and cheapness of this preparation, Mr. Griffiths suggests its employment for medicinal purposes in lieu of oxide of zinc, or, at all events, a trial of its possible therapeutical applications.

QUEEN'S COLLEGE, BELFAST.—During the past session the number of students attending classes in medicine amounted to 268, an increase of 13 over that of last year. The President, in his annual report, lately published, states that the reports of the Civil Service Commissioners, and of different Governmental authorities at home and abroad, continue to afford most satisfactory testimony that the students of the College still hold their place amongst those of the other universities of the empire, not only in the arenas of scientific and literary competition, but in the practical work afterwards assigned to them in the various departments of the public service.

Medical News.

INDIAN MEDICAL SERVICE. — The following is a list of candidates for commissions as Surgeons in this Service who were successful at the competitive examination held at Burlington House on Aug. 12th :—

	Marks.		Marks.
J. H. Sweeny	2261	H. B. Briggs	1954
D. F. Barry	2252	C. G. W. Lowdell ..	1940
G. F. A. Harris ..	2247	A. S. Faulkner	1760
J. Anderson	2245	C. Mallins	1640
C. J. Bamber	2218	R. M. Allen	1530
E. H. Dumbleton ..	2120	E. M. Damla	1490
M. O'Dwyer	1907	H. S. C. Carruthers..	1472
W. P. Carson	1905		

Twenty-one candidates competed for fifteen appointments, nineteen of whom were reported qualified, two having retired during the examination.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 22nd :—

Evans, Edward Prichard, Llanfaben, Glamorganshire.
Woodman, William Edwin, Linslade, Leighton Buzzard.

The following gentlemen on the same day passed the Primary Professional Examination :—

James Turton, Charing-cross Hospital; John William Sanders and Wm. Washington David, Guy's Hospital; Joseph Ernest Bullock and Franklin Epps, University College; Walter G. Augustus Bedford and Charles Alex. Payne, St. Bartholomew's Hospital; William Edward Alldridge and Walter James Clarke, Birmingham.

DR. REID has been elected Coroner for County Monaghan. He was unopposed.

DR. SANDERSON, of Penrith, has been presented with a handsome timepiece by the Loyal Beacon Lodge of Odd Fellows upon the occasion of his marriage.

DONATIONS TO MEDICAL CHARITIES.—The Corporation of the City of London have given £105 to the Victoria Hospital for Children, Chelsea. Mr. Charles Meynell has given £100 to the Hospital for Women, Soho-square.

Medical Appointments.

BAILEY, T., L.R.C.P.Ed., M.R.C.S.E., has been appointed a Medical Officer to the Hockley Branch of the Birmingham Provident Dispensary.

BARK, J., L.K.Q.C.P.I., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Kirkdale District of the West Derby Union, vice Johnson, resigned.

BRIDGEFORD, Mr. J. S. S., has been appointed Assistant House-Surgeon to the Rotherham Hospital and Dispensary.

BROOKS, C., L.S.A.L., has been appointed an Honorary Medical Officer to the Purton Cottage Hospital.

CHOWN, J. W., M.B., C.M., has been appointed a Medical Officer to the Hockley Branch of the Birmingham Provident Dispensary.

DAVIES, J., M.R.C.S.E., has been appointed Medical Officer for the Llanbrynmair District of the Machynlleth Union, vice Edwards, deceased.

EADY, G. J., M.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the St. Saviour's Middle-class School, Ardingly, Sussex, vice Bowes, appointed Assistant Medical Officer to the Ipswich Lunatic Asylum.

FRY, J. B., L.R.C.P.L., M.R.C.S.E., has been appointed an Honorary Medical Officer to the Purton Cottage Hospital.

JONES, V. Ll. W., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the St. Clear's District of the Carmarthen Union, and Medical Officer of Health for the St. Clear's Sub-district of the Carmarthen Rural Sanitary District, vice Rees, resigned.

JONES, W. I., L.R.C.P.Ed. & L.M., L.F.P.S.G., has been appointed Medical Officer of Health for the Llandilofawr Rural Sanitary District, Carmarthenshire, at £50 for one year, vice the District Poor-law Medical Officers, whose appointments have expired.

KENNEDY, Mr. H., has been appointed Assistant-Surgeon to the Mater Misericordiæ Hospital, Dublin.

LANGLEY, N. B., M.R.C.S.E., L.S.A.L., has been appointed an Honorary Medical Officer to the Purton Cottage Hospital.

LEECH, D. J., M.D., M.R.C.P.L., has been appointed a Physician to the Royal Infirmary, and Physician to the Deaf and Dumb Institute, Manchester, vice Wilkinson, deceased.

LEONARD, C., F.R.C.S.Ed., M.R.C.S.E., has been appointed a Consulting Surgeon to the Royal Infirmary, Bristol, on resigning as Surgeon.

MACLEAN, J. C., M.B., C.M., has been appointed an Honorary Medical Officer to the Purton Cottage Hospital.

NIEL, J., M.B., C.M., has been appointed Assistant Medical Officer to the Cheshire Lunatic Asylum, Parkside, Macclesfield, vice Lyle, resigned.

PARKES, T. R. B., M.D., M.R.C.S.E., has been appointed an Honorary Medical Officer to the Purton Cottage Hospital.

POWNE, W., L.R.C.P.L., M.R.C.S.E., has been appointed an Honorary Medical Officer to the Purton Cottage Hospital.

PRICHARD, A. W., M.R.C.S.E., L.S.A.L., has been appointed a Surgeon to the Royal Infirmary, Bristol, vice Leonard.

STRANGE, W. H., M.D., M.R.C.S.E. & L.M., L.S.A.L., has been appointed a Medical Officer to the Hampstead Dispensary, vice Evans, resigned.

SWINHOE, G. M., L.R.C.P.L., M.R.C.S.E., has been appointed an Honorary Medical Officer to the Purton Cottage Hospital.

THOMSON, D. G., M.B., C.M., has been appointed Assistant Medical Officer to the Derbyshire Lunatic Asylum, Mickleover, vice Gould, resigned.

VINRACE, J., M.D., M.R.C.S.E., has been appointed a Medical Officer to the Hockley Branch of the Birmingham Provident Dispensary.

WALDEGRAVE, S., M.R.C.S.E., L.S.A.L., has been appointed Resident Medical Officer to the Purton Cottage Hospital.

WILLIAMSON, Dr. A. V., has been appointed Medical Officer and Public Vaccinator for the Escomb District of the Auckland Union, vice McKechnie.

Births, Marriages, and Deaths.

BIRTHS.

BATT.—On the 17th inst., at Camden-road, the wife of Edward Batt, M.D., of a daughter.

BUTLER.—On the 21st inst., at Ormonde House, Guildford, the wife of Thomas M. Butler, M.R.C.S.E., of a daughter.

CLOUTING.—On the 24th ult., at Thetford, the wife of John Revett Clouting, M.R.C.S.E., of a daughter.

DE LA MOTTE.—On the 19th inst., at Carlton-crescent, Southampton, the wife of Peter W. De la Motte, M.R.C.P., of a son.

FRODSHAM.—On the 21st inst., at Denham House, Upper Streatham, the wife of John Mill Frodsham, M.D., of a daughter.

LYDDON.—On the 21st inst., at Faversham, Kent, the wife of W. Reeks Lyddon, L.R.C.P.Ed., L.R.C.S.I., L.S.A.L., of a son.

MACKESY.—On the 20th inst., at Lady-lane, Waterford, the wife of George Ivie Mackesy, M.B., of a son.

NOAD.—On the 23rd inst., at Lower Norwood, the wife of Henry Carden Noad, L.R.C.P.L., of a daughter.

PAIRMAN.—On the 25th inst., at Robert-street, Hampstead-road, the wife of Robert Pairman, M.D., of a son.

WOLSELEY.—On the 20th inst., at St. Helen's, Dunfanaghy, the wife of C. Brooke Wolseley, M.D., of a daughter.

MARRIAGES.

AUSTIN—MAITLAND.—On the 20th inst., at St. John's the Evangelist, Aberdeen, by the Rev. E. Powys Sketchley, John Alfred Austin, M.D., of Tongue, Sutherlandshire, to Elizabeth Allen, second daughter of Mr. William Maitland, of London.

DUKE—THORN.—On the 20th inst., at St. Mary's, Paddington-green, by the Rev. — Wilkins, George Amos Duke, M.R.C.S., of Cornwall-road, Bayswater, to Julia Janet, fourth daughter of William Thorn, M.D., of Harrow-road, Paddington.

LISTER—BURRILL.—On the 22nd inst., at the Parish Church, Masham, Yorkshire, by the Rev. G. M. Gorham, assisted by the Rev. W. Glaister, Edward Lister, L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., of Haydock Lodge, Ashton-in-Mackerfield, Lancashire, to Elizabeth Lucinda, elder daughter of the late William Burrill, of Masham and Liverpool.

DEATHS.

ARSCOTT.—On the 19th inst., at Exeter, Robert Arscott, M.R.C.S.E., aged 76.

BREMNER.—On the 10th inst., at Chippenham, William Bremner, M.R.C.S.E., aged 80.

BURN.—On the 24th inst., at Fernie Knowe, Budleigh Salterton, William Hewitt Seton Burn, late Surgeon-General, Madras Army, aged 63.

CHARLTON.—On the 20th inst., at Little Hulton, Lancashire, Thomas Charlton, L.S.A.L., aged 76.

COLGAN.—On the 20th inst., at Tivoli-road, Kingstown, Henry Colgan, L.K.Q.C.P.I., aged 54.

DUFFY.—On the 20th inst., in London, James William Duffy, M.D., late of Valparaiso, aged 72.

GAYER.—On the 26th inst., at Calcutta, Edward John Gayer, Surgeon-Major, Indian Army, aged 44.

GOOLDEN.—On the 19th inst., at Altrincham, William Goolden, Surgeon.

LYDDON.—On the 22nd inst., at Faversham, Kent, Sarah, the wife of W. Reeks Lyddon, L.R.C.P.Ed., L.R.C.S.I., L.S.A.L.

MEEK.—On the 16th inst., at Market-Drayton, William Sutherland Meek, M.R.C.S.E., aged 59.

POLLARD.—On the 20th inst., at Chorley, Lancashire, John Pollard, M.R.C.S.E., aged 84.

TUTTIETT.—On the 22nd inst., at Honiton, Harry Barrington Tuttiett, M.R.C.S.E., of Ventnor, aged 62.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. J. Goodman: Fibrin and its Relation to Life, Health Longevity, and Disease.
Dr. T. J. Mays on the Therapeutic Forces.
Dr. L. A. Stimson: Operative Surgery.
Dadabhai Naoroji on the Poverty of India.

Notes, Short Comments, and Answers to Correspondents.

THE VIRGINIAN PRUNE.

THE Virginian prune-bark has been largely employed in America; but has apparently found little favour in this country, in spite of several recommendations. Some of the reasons for this may be gathered from an interesting memoir upon it, which has received a prize, at the Société Royale de Médecine of Brussels. In the United States it is regarded as one of the most useful of the indigenous drugs. It is the bark of a tree which grows to a considerable height in the South-Western States. The inner bark is the officinal part, and that of the root is preferred to that of the trunk or branches. The properties lessen on keeping, and the fresh bark is therefore preferred. It contains amygdalin and emulsin, which, in the presence of water, produce hydrocyanic acid, and it also contains a certain amount of tannin. The quantity of amygdalin appears, according to several analyses, to be extremely variable, changing with each specimen of bark—that of the root containing more than that of the trunk, and the latter more than that of the young branches. The quantity varies also with the age of the tree and the season at which the bark is collected, with the freshness of the bark, and with the mode in which it is preserved. It is evident, therefore, that little uniformity can be expected in the action of the bark. Such action as it possesses is due seemingly to the depressing effect of the hydrocyanic acid and the astringent tonic action of the tannin. It is difficult to find in this an intelligible reason for its reputed effects on the many diseases in which it has been recommended, which include general debility, the convalescence from acute disorders, gastralgia, fevers of all kinds, phthisis, heart disease, bronchitis, whooping-cough, diarrhœa. Externally it has been employed in atonic ulcers, catarrhal ophthalmia, and hæmorrhagic discharges. The reporter on the memoir asks, however, whether we really want another drug the chief action of which depends on hydrocyanic acid, which can be itself used in definite dose and absolute purity.

Mr. J. R. Hargreaves.—The paper will appear in an early number.

THE POROPLASTIC SPINAL JACKET.

To the Editor of THE LANCET.

SIR,—In your issue of July 13th there appears a note from Mr. Fred. R. Fisher, under the title of a "New Form of Spinal Jacket," in which he describes the use of what he calls Cocking's patent poroplastic felt. The same, or a similar material, has been used at the Brooklyn Orthopædic Infirmary for the last two years. The first spinal jacket of this material was applied there on September 15th, 1876, at my suggestion, by Dr. Arthur R. Paine, one of the surgeons, and since that time has been in constant use, not only in cases of spinal caries, but as splints for fixing the hip- and knee-joints and other orthopædic cases.

But my object is not so much to consider the question of priority as to confirm Mr. Fisher's estimate of the dressing, which he uses very much in the manner that we use it.

The felt, or, as it is also called, shell-lac cloth, which we first used, was the same as used by hatters in making the brims of stiff hats; but of late a heavier kind has been used for our purposes.

I may be permitted to describe the manner in which it should be applied. The patient being suspended in Sayre's swing, the following measurements should be taken, and the splint cut according to them:—(1) From a point one and a half inches to one side of the linea alba, on a line with the anterior superior spinous process of the ilium, around the back of the pelvis, to a corresponding point on the opposite side. (2) From a point one and a half inches to one side of the middle of the sternum, around the back of the thorax, to a corresponding point on the opposite side. These measurements will leave a space in front for lacing. (3) From the seventh cervical vertebra to the top of the sacrum. Slits are cut in the lower edge of the splint an inch long and two or three inches apart, so as to allow the lower part to mould itself more accurately to the pelvis, and thus get a better base of support. It should also be cut away under the arms. The chest is now covered by a well-fitting woollen shirt or flannel bandage, the patient suspended. The felt, made pliable by dry heat or steaming, or by immersion in very hot water, is quickly applied, and covered with a bandage from below upwards, very firmly, so as to mould it to all the inequalities of the surface. The splint almost immediately regains its inflexibility; it may then be removed, trimmed up, and holes punched along the front edges for lacings, as advised by Mr. Fisher, and reapplied. Two brace straps may be attached to the top edge of the splint, which cross over the shoulders and buckle in front. The splint may be made more comfortable in hot weather by perforating here and there with a punch.

The splint for a child weighs only eight to twelve ounces, very much lighter than a plaster-of-Paris jacket, is comfortable, more cleanly, and more easily applied, while it fulfils all indications that can be accomplished by the plaster-of-Paris jacket of my friend Dr. Sayre.

Yours respectfully,
JAS. C. HUTCHISON,
Surgeon in Chief, Brooklyn Orthopædic Infirmary, &c.
Brooklyn, New York, August 1st, 1878.

S. C. P. will find all his questions answered in the papers which have appeared on Davos-am-Platz in THE LANCET of October 20th and 27th, 1877, and June 8th, 1878.

Mr. Harvey should refer to a medical publisher or the Medical Directory.

STRYCHNIA POISONING.

A CLERK in a drug store committed suicide last week in Dublin by taking strychnia. It is stated that he swallowed, about eleven o'clock, one drachm of strychnia, and died at half-past two P.M. the same day. At one o'clock he was taken to the City of Dublin Hospital; but as he had been drinking, and no symptoms of poisoning were present, the resident on duty refused to admit him, there not being a bed vacant, and he was removed to another hospital, dying one hour after admission. In this case, if we can believe the evidence given, tetanic spasms did not occur until upwards of two hours after the poison had been taken—a most unusual circumstance, as the average time is ten to twenty minutes, and the longest interval recorded is one mentioned by Taylor, in which two and a half hours elapsed before the appearance of the characteristic symptoms.

Brierfield.—We are not aware of any trustworthy work on the subject.

"OX-GALL IN INTESTINAL OBSTRUCTION."

To the Editor of THE LANCET.

SIR,—In your last week's issue Dr. Murray draws the attention of your readers to the estimable value of injection of ox-gall as a ready method of relieving intestinal obstruction. Having had a moderately close acquaintance with this subject during the last twenty-five years, and consequently having used it in no inconsiderable number of cases during that period, I can fully bear testimony to its efficacy. But there is nothing new in this suggested remedy of ox-gall injections, inasmuch as by going back to the morning of life of my professional curriculum of study I hold a vivid recollection of the practical teachings and illustrations at the bedside of patients by Mr. John Hilton at Guy's Hospital, who frequently demonstrated its utility in intestinal obstruction, and of its having, with a good dose of calomel and jalap, removed many a so-called abdominal tumour.

Nevertheless valuable as ox-gall is as a stimulating enema, it is only of service to us in certain idiopathically selected cases, such, e. g., as arise from partial paralysis of the muscular structure of the bowel; for we must vigorously exclude the hundred-and-one diseases of an organic character. In the former class I have frequently found gentle yet firm kneading the intestines with closed fists of signal service.

I have often been consulted for protracted diarrhœa (?) by patients whose rectum, on examination, was found completely blocked up with an enormous quantity of hard scybala, and which could only be removed comfortably by breaking up with the fingers well oiled; and it is in such cases as these that I have witnessed the beneficial effect of ox-gall injections after the impacted fæces have been expelled from the rectum. But to regard this remedy as a sort of panacea in obstruction would be worse than useless, for verily I know of no diseases incident to the human subject which tax the skill and judgment of the physician and surgeon more for their elucidation and diagnosis than those of the intestine—none more for eclectic treatment, while none are more fraught with disastrous results when injudicious remedies have been resorted to.

I am, Sir, yours &c.,
Kensington, August 25th, 1878. DAVID JOHNSON, M.D

To the Editor of THE LANCET.

SIR,—I can fully bear out Dr. Murray in his remarks on the value and efficacy of ox-gall in obstinate cases of obstruction of the bowels; that it is a powerful purgative and dissolvent, and has an equally powerful effect in breaking up fæcal accumulation, is unquestionable. I might mention one case in particular, in which no motion, beyond a few small hard pieces of black fæcal matter, had been passed for some two or three weeks; there was great distension of the abdomen, and jaundice from pressure on the biliary duct. I administered an enema of ox-gall and soda, the consequence of which was that an almost continuous stream of dark liquid motion passed for two days, over which apparently my patient had but little, if any, control. On the third day a large fæcal mass descended into and blocked up the rectum. Having reduced this in size with the aid of the scoop, it was passed after much suffering, great bearing-down, and straining, and assistance from myself, resembling more than anything else the passage of the fœtal head. This was immediately followed by the most copious and *longest* motion I ever remember seeing, but withal healthy both in colour and consistency. My patient's recovery was as rapid as it was complete.

Yours obediently,
J. C. MAYNARD, M.R.C.S., M.R.C.P. Edin.
Bishop Auckland, August 27th, 1878.

Justitia.—We think the principal had no power to withhold any part of what was due to our correspondent. But it is a legal, not a medical question. The notice should have been agreed upon beforehand. Consult a lawyer.

J. D. M.—Copies of the Medical Register are not given to persons registered. They must be procured by purchase.

S. B. S.—Certainly not.

Mr. Field.—The agreement should be drawn by a solicitor.

A CAUTION.

To the Editor of THE LANCET.

SIR,—I was favoured by a call from an impostor, who represented himself to be a graduate of Edinburgh University, who had lost his fortune in America, and unable to obtain employment in England since his return. He is tolerably conversant with the names of many good men, good-looking, about 5 ft. 10 in. in height, with full head of hair and moustache, Dundreary whiskers, fair, and American-Scotch accent. His object is money, and as he will not improbably try his hand on other Edinburgh men, it is as well they should know he is an impostor.

Yours truly,
August 24th, 1878. FRANK GODFREY.

INDIAN BAEL.

SIR JOSEPH FAYRER has recently called attention to the value of the Indian bael in certain diseases. It has the advantage of being simple, and in India common and easily procured. He rightly urges that it is a matter of economical wisdom to employ, as far as possible, the local remedies of a country, and he therefore points out that those medical students who intend practising in India should make themselves acquainted with many native remedies which are at present less used in the practice of Europeans than they deserve to be. The tree of which the bael is the fruit grows to a large size, and is sacred to Siva. The fruit, the size of an orange, contains an aromatic essential oil, with pungent and astringent substances. It is employed especially as a carminative, as an astringent, and an aperient in constipation, being given especially in dysentery, diarrhœa, and indigestion; in the latter to regulate the bowels. In the later stage of dysentery, when diarrhœa, simple or dysenteric, continues, with exhaustion, Sir Joseph Fayrer especially recommends it. It has been occasionally given in this country, and a formula exists in the British Pharmacopœia for the preparation of a liquid extract, but the value of this preparation is regarded as somewhat doubtful. In India it is frequently given in the form of sherbet or marmalade.

Alpha.—Certainly not. His uncle's services can give him no claim.

CHLOROFORM IN PARTURITION.

To the Editor of THE LANCET.

SIR,—A point of practical moment at the bedside of the lying-in woman tempts me to offer the following remarks.

The dangers of chloroform as an anæsthetic have been much magnified of late by certain writers, because the principles which guide its employment are misunderstood, not borne in mind, or neglected. What can be the motive of producing complete anæsthesia in the simpler class of obstetric patients? Here the legitimate object is not to produce total insensibility, but such a state of matters as will enable us to carry out our manipulations in the most satisfactory way possible. That can be accomplished with a very small quantity of chloroform. Why then push it, so to speak, to excess? My own experience has induced me never to give chloroform unduly largely, and there will be nothing to regret, much to be thankful for. If you will insist upon a large quantity, I say most unhesitatingly it is bad practice and culpable, and you must look out for "squalls." The grand secret of success to inculcate in these minor cases is to stop the inhalation short of suspending consciousness, a procedure which will meet the most sanguine expectations of all who are disposed to give chloroforming a trial in the manner described. I believe I may challenge dissentients to bring forward a single case even where any disastrous sequel has been noted, attributable to chloroform given within the limits I have indicated in suitable cases. Chloroform is the accoucheur's best friend in many circumstances, can only do harm when inhaled too freely or injudiciously. Used cautiously, it will doubtless maintain its deservedly high place for usefulness, the good effect depending upon its use, not its abuse.

I cannot endorse the opinion of a contributor in your present number, who thinks chloroform should be "discarded" or thrown aside in obstetric practice. Your obedient servant,

August 19th, 1878. H. KIERNANDER, L.R.C.P., L.M. Edin.

A Disgusted One.—We are obliged for the communication. The discrepancy pointed out is not so great as our correspondent supposes. The letter is too long for insertion.

Dr. David Ridpath.—The law requires registration, and recognises it as the only proof of qualification.

Surgeon is thanked for his communication.

MEDICAL TITLES.

To the Editor of THE LANCET.

SIR,—After your answer to "Medicus" in your issue of last week—viz., "L.R.C.P. Edin. is a physician, not 'doctor'; Mr. ——, physician, is the correct description,"—I should beg to suggest that the L.R.C.P.s of London do draw up a petition against the gross injustice done to them by the L.R.C.P.s of Edinburgh (and others not M.D.) assuming the title of "Dr.," and that such petition be presented to the President of the Royal College of Physicians of London, with an earnest request to forward it to the Royal College of Physicians of Edinburgh, and I would further suggest that such a petition be opened for signature at your Office. I could point out men in my neighbourhood who assume the title of "Dr." on the M.R.C.S. and L.S.A. qualifications only, and thereby do the L.R.C.P. Lond. infinite injustice, he being prohibited by a bye-law from assuming such title. Some argue that having assumed the title for years, they should be allowed to retain it, because of altering "their door-plate and cards." Might not such people be compared to one who, having escaped conviction for some time, but at last caught, thinks because he has so often escaped he should not suffer for his crime.

Yours truly,

August 26th, 1878. L.R.C.P. London.

GELSEMIUM SEMPERVIRENS.

To the Editor of THE LANCET.

SIR,—Permit me to correct an error in my letter on "Poisoning by Gelsemium Sempervirens," printed in THE LANCET of the 29th of June last. Following the usage of nearly all English writers, I inadvertently wrote *gelseminum* instead of *gelsemium* (Jup.).

The importance of writing all botanical terms correctly must be my apology for asking the insertion of this note.

Yours &c.,

Bristol, August 24th, 1878. JAMES GAGE PARSONS, M.D., &c.

VITAL STATISTICS OF QUEENSLAND.

MR. HENRY JORDAN, Registrar-General of Brisbane, reports that during the month of April the excess of births over deaths in his district was 58, with an estimated population of 30,883 persons. An analysis shows that 68·29 per cent. of deaths were of children under five years. The highest temperature recorded (in the shade) was 95·5° Fahr., and the lowest 59°; the mean daily range was 22·4°, and the mean atmospheric pressure 30·114 inches, the average of the same month during the past ten years having been 30·063 inches.

CASE OF LARYNGEAL PHTHISIS.

To the Editor of THE LANCET.

SIR,—The following case may be of interest to some of the readers of your journal. It is given as communicated to me by a trustworthy observer.

"A married lady, one of whose brothers had died of laryngeal phthisis and who had besides lost another brother and a sister, both of whom laboured under pulmonary disorder, and who had herself been for years accustomed at intervals to discharge of blood from the larynx or its vicinity, was in the winter of 1874-5 called upon to nurse her husband through a very severe and critical illness. The weather was fearfully inclement at the time, the frost being intensely severe, and the ground covered with deep snow, which in many places had drifted to from five to fifteen feet deep, and effectually precluded the visits of the sick man's medical attendant, who lived at a distance of several miles. As her husband required continual attention, and appeared to be in a sinking state for nearly two days during the doctor's absence, there was a combination of anxiety, fatigue, and exposure of no ordinary character pressing upon the lady, lasting in all over nearly three weeks; and, as her husband began to mend, she caught cold, and her own health gave way entirely. She lost all strength, and began to waste away; and, besides this, incessant bloody expectoration, leading to examination of her throat, disclosed the fact of considerable ulceration of the larynx and adjacent parts. In June, 1875, she was taken to see one of the leading London physicians, who did not adopt a very hopeful view of her case, and prescribed gargling with tannin, inhalation of carbolic-acid vapour, and the like. Under former advice she had repeatedly made use of the last-named remedial agent, but without apparent effect, notwithstanding the consumption of many ounces of the acid. From nervous irritability of the fauces gargling was impossible, and painting with a camel-hair brush equally so. The inhalation, however, was adopted and continued over many weeks. Still no effect upon the bloody expectoration seemed to be produced. Every morning, from February, 1875, to October, 1877, more or less of the discharge, sometimes of a dark colour, admixture of apparently purulent matter, and in quantity nearly a wineglassful, at other times stained with fresh blood, without remission for even a single day, continued. The patient's general health, however, on the whole, seemed to be improving; but any fatigue, however slight, immediately made itself felt in the affected part, the sensation being that of pain produced by pressure with a pointed instrument. Cold also or damp produced very unpleasant sensations. Things were in this condition when, at the beginning of October, 1877, one of the lady's children, a girl seven years old, fell ill with scarlet fever. The case was a very severe one, and for forty-eight hours, commencing the second day after the disorder manifested itself, it was a very doubtful one. The lady undertook the nursing of the child herself; and as there were other young children, to the number of four, in the family, besides youthful servants and others, and the house was not such as to admit of anything approaching to satisfactory isolation, the utmost possible care was taken, by the copious use of disinfectants, as well as avoidance of contact with the sick room and its occupants, to prevent if possible the spread of the infection. Among other means, a sheet was suspended so as to cover the entire door opening into the sick room, and this was kept continually wet with a solution of carbolic acid in water. The lady was shut up with her patient on the Sunday, and on the Friday following she noticed that the bloody expectoration had ceased, notwithstanding the entire want of sleep for four consecutive nights, and all the anxiety and fatigue of watching and tending on a delirious and generally violent patient. Nor has it ever returned from that time to the date of the present writing. The lady's general health is better than it has been for years, and she is equal to a large amount of exertion without the recurrence of unpleasant sensations or symptoms.

"Possibly the case may suggest a mode of application of the vapour of carbolic acid in other instances." Yours &c.,

August, 1878. MEDICUS.

T. B.—The advertisement and all the facts should be placed before the Irish College of Surgeons. It would not be right to meet a practitioner who acts as alleged. We should be glad to be informed of the answer given by the College whose diploma is dishonoured by the practices described.

I. V. R. C.—We cannot recommend the scheme for organisation of volunteer bearers' companies for military purposes in connexion with the medical schools. The students have already sufficient work on hand and enough of subjects to engage their attention without this in addition.

COLOURED SILK GLOVES.

To the Editor of THE LANCET.

SIR,—I should be very much obliged to any of your readers who could give a description of the eruption produced by the "orange-green" silk gloves, so much in fashion at present. In a case of palmar eruption which has come under my notice, and which may be, I think, traced to such a source, it commenced with small vesicles, and was accompanied with most intense irritation. Your obedient servant,

August, 1878. M.D